REPORT RESUMES

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THE CHARACTERISTICS OF TEACHER EDUCATION STUDENTS IN THE BRITISH ISLES AND THE UNITED STATES.
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A COMPARISON OF PRESERVICE TEACHER EDUCATION STUDENTS WAS PERFORMED IN THE AREAS OF (1) TEACHER ATTITUDES AND PERSONALITY CHARACTERISTICS, (2) GENERAL EDUCATIONAL PREPARATION, (3) PROFESSIONAL EDUCATION KNOWLEDGE, AND (4) GENERAL INTELLIGENCE. ALMOST 5,000 ELEMENTARY AND SECONDARY EDUCATION STUDENTS IN THE UNITED KINGDOM AND THE UNITED STATES RECEIVED A 12-HOUR BATTERY OF STANDARDIZED TESTS. THE RESULTS ON THE TEACHER CHARACTERISTICS AND ATTITUDES MEASURED INDICATED THAT STUDENTS IN THE UNITED STATES WERE MORE LEARNING-CENTERED OR TRADITIONAL AND LESS CHILD-CENTERED OR PERMISSIVE IN THEIR APPROACH TO TEACHING THAN WERE THEIR BRITISH COUNTERPARTS. AMERICAN STUDENTS APPEARED TO HAVE BETTER PREPARATION IN MEASURED AREAS OF PROFESSIONAL EDUCATION. OTHER RESULTS SHOWED A LARGE NUMBER OF SIGNIFICANT DIFFERENCES AND SOME DEFINITE PATTERNS. (JM)

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THE CHARACTERISTICS OF TEACHER EDUCATION STUDENTS IN THE BRITISH ISLES AND THE UNITED STATES

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Chapter I

INTRODUCTION, PROBLEM, AND OBJECTIVES

Introduction

Educational concerns and achievements in 1965 leave little doubt in any person's mind that the ultimate goal for education in the United States and elsewhere is an ever increasing level of educational opportunity coupled with quality and equality. Although the past three decades of this century have witnessed a golden age in education, the possibilities in the final third of the twentieth century are even more exciting, actually staggering.

Any contemplation of our educational future, in a national sense, must note that the education of teachers has been of particular concern and will be the fundamental keystone for all educational innovation and improvement. Educational progress fundamentally is dependent upon the development of teacher competence. Teacher educators in the present decade stand accountable before all parts of the world for teachers in service and those being prepared for future teaching assignments.

The present challenge of providing an ever better education for children has been responsible for a period of continuous ferment in teacher education since the 1950's. Many experimental and demonstration programs in teacher education have been devised and implemented. All such efforts, however, have been confined within the national boundaries, and no attempt from a research or experimental base has been made to compare teacher education programs and products of the United States and other countries. Foshay has said, "If custom and law define what is educationally allowable within a nation, the educational systems beyond one's national boundaries suggest what is educationally possible."[1] Thus a fundamental need exists to become more aware of our own assumptions about and procedures in the education of elementary and secondary teachers through the process of looking beyond ourselves to the teacher education objectives, philosophy, patterns, and products of other countries. Fundamentally, American teacher educators must view more broadly teacher education programs and the students involved in them. It is necessary to learn more about the characteristics of teachers being prepared in teacher education programs under different cultural settings.

Various writers in comparative education have described teacher education programs as they are conceived and operating in European, African, Asiatic, Australian, North American, and Latin American countries. These descriptions have dealt principally with teacher education philosophy, objectives, and curricular patterns. Practically no information has been provided about the outcomes or products of educational systems. Anderson has lamented this point as "the major missing link in comparative education."[2] The descriptions of teacher education programs in various countries do not indicate empirically whether such programs and the teachers produced from them are fundamentally different or alike or better or worse than those existing in the United

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[1] Arthur W. Foshay, et al. "Educational Achievements of Thirteen-Year-Olds in Twelve Countries," International Studies in Education, (Hamburg: UNESCO Institute for Education, 1962.) p. 7.

[2] C. Arnold Anderson, "Methodology of Comparative Education," International Review of Education, 7:7-8, 1961.

States. Indeed, many criticisms of American teacher education, for example, those made by Rickover and Trace,[3] rest upon the assumption that we have fallen away from the higher, intellectual standards of English and European systems of teacher training. In this respect, Havighurst has commented that comparisons such as those made by Rickover and others "have generally been worse than useless.... The fault of these writers is that they have not taken the trouble to build a base on facts about education and educational achievement which can be interpreted comparatively. Rather they start with a pre-judgment and tend to select data to support their conclusions."[4] However, the teacher educator cannot be ignorant of what is taking place in his field in the many educationally conscious countries of the world. A knowledge and appreciation of the facts, problems, and issues of teacher education in other countries derived from empirical research will assist the American educator as well as his counterpart in another country to obtain a better perspective of himself and his efforts and will furnish a more competent and convincing reply to the critics of teacher education everywhere.

Recent years have found the comparison of people from different nations or different cultural groups becoming an important part of behavioral science. Havighurst, in noting this research development, has further said that

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[3] H. G. Rickover, American Education A National Failure--The Problem of Our Schools and What We Can Learn From England. (New York: E. P. Dutton and Co., Inc., 1963.) 502 pp.
Arthur S. Trace, Jr., What Ivan Knows That Johnny Doesn't. (New York: Random House, 1961.) 213 pp.

[4] Robert J. Havighurst, "Cross-National Studies of Children and Adolescents," Journal of Teacher Education, 14:100, March 1963.

"Cross-national studies will probably come to have a place in teacher education comparable to the place now occupied by cross-cultural studies within our own country."[5]

What will be the usefulness of empirical cross-national or cross-cultural studies in teacher education? Some answers to this question have been stated directly or indirectly in the foregoing paragraphs. However, some additional, pertinent points can be made.

The growing interdependence of nations and the need for world cooperation is constantly forcing teacher educators worldwide to consider a wholly new set of responsibilities. These involve a reconstruction of the cultural values which a teacher transmits about his own and other nations. All too frequently teachers and curriculums have presented stereotyped pictures of peoples and cultures and have treated facts in geography and history apart from their broader significance. Facts have been emphasized to the near exclusion of values and attitudes, and significant controversial issues tend to be avoided. The teaching of American children to understand the people of other nationalities and the teaching of people in other nationalities to understand American children needs a full understanding of the causes for differences between people living in different countries. To achieve this, the varieties of human behavior which occur in various environments must be understood by teachers. There is no better place to start in accomplishing such understandings on the part of the teachers of children than to develop better world understanding and cooperation between the teachers of teachers. The beginning of such efforts lies in empirical, cross-national research efforts. A banding together of teacher educators from all parts of the world to explore better ways of teaching and learning could profoundly affect the destiny of future generations.

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[5] Ibid. p. 99.

Familiarity with teacher education problems in other countries may or may not provide solutions to our own problems but they will help us see them more clearly. Cross-cultural teacher education research should stimulate lively, informed discussion on the education of teachers and possible improvements in the educational practices of teacher educators. At least such efforts would enable teacher educators to cross national boundaries more easily in developing teacher education objectives and curriculums.

Many educational writers and speakers maintain that existing teacher education research has not had any large impact on teacher education curricula. Teacher education curricula has been mainly derived from a philosophical-historical and not an empirical base. However, there is increasing recognition of the need for teacher education research which will indicate curricular directions. Such readiness will result in a greater role for teacher education research in teacher education curriculum development, and new information provided in carefully conducted comparative teacher education research studies could aid current efforts to improve programs of teacher preparation. At any rate, teacher educators must not fall behind in any area of research and the field of comparative education is relatively untouched by researchers of teaching.

Finally, teacher educators must design and conduct research in comparative education which will join up with that being carried on in this field by sociologists, social psychologists, and anthropologists. The development of one scientific area stimulates and demands research efforts in all related fields.

Problem

The purpose of the study was to assess and compare the intellectual and personal characteristics of pre-service teacher education students in the United Kingdom and the United States. These characteristics were selected from among those which research or opinion indicated important to teaching. A cross-cultural or cross-national study of this nature had not been attempted previously.

The study proposed to conduct cross-cultural research on the teacher characteristics of British and American teacher education students. The selection of the United Kingdom for such research was based on the following reasons: (1) A study of this type logically should begin in a locality where the English language was the common tongue, (2) teacher education in the British Isles had various points in common, as well as fundamental differences, with teacher education in the United States, (3) a minimum of administrative and technical difficulties were contemplated in comparative research between the two nations, and (4) the College of Education at the University of Toledo had engaged previously in cross-cultural research efforts with the United Kingdom and contacts had been made which effectively aided the completion of the present project.

Objectives

The objectives of the study related to pre-service teacher education students in the United Kingdom and the United States and were as follows:

1. To assess and compare teacher attitudes and personality characteristics.
2. To determine and compare general educational preparation in

humanities, natural science, mathematics, and English.[6]

3. To measure and compare professional education knowledge and understandings.
4. To ascertain and compare the level of general intelligence.

The use of the word "compare" in the above context means a statistical test for significant differences between the groups. Separate comparisons were made between British and United States teacher education students preparing to teach at the secondary school level and between British and United States teacher education students preparing to teach at the elementary school level. At the secondary level, only those students with "majors" or "teaching fields of concentration" in what was traditionally accepted as an academic discipline were included in the study. Thus, secondary education students preparing primarily to teach home economics, physical education, industrial arts, agricultural or commercial subjects were not included.

The plan of the study called for comparisons to be made at three stages of training in teacher education programs. Stage three, of major interest in the investigation, occurred at the end of the teacher preparation program. Stage two occurred one year previous to stage three, and stage one was found two years previous to stage three insofar as it was possible to identify the students on this basis in the two countries. These stages corresponded to the traditional close of the senior, junior, and sophomore years in a four-year degree teacher education program. However, this terminology was not used in the study since the majority of the training colleges in the United Kingdom had three-year programs only.

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[6] Educational preparation in the social studies could not be determined or compared due to the great degree of cultural bias occurring in social studies instruments considered for data gathering.

The specific comparisons included in each of the four general objectives stated previously were as follows:

Teacher Education Students in the United Kingdom	versus	Teacher Education Students in the United States
Stage 3		Stage 3
Stage 2		Stage 2
Stage 1		Stage 1

Since separate comparisons were made at the secondary and elementary school levels, a total of six comparisons were made on each measure included in the study. Primary attention was focused on the stage three comparisons or the products of the final year in the two educational systems. Stage one and stage two comparisons were used in evaluating the relative effectiveness of lesser amounts of preparation in the two teacher education systems.

A final objective of the study was to analyze trends in the measured characteristics across the final three years of preparation within the British and United States systems. The data collected for stages one, two, and three were used for this purpose.

Descriptions of pre-service elementary and secondary teacher education programs of the higher institutions used in the study were obtained. These descriptions were based on visits made to selected colleges and universities participating in the research project in both countries. It was planned that the descriptions obtained from the visits made to various institutions would specify the nature of the colleges and universities studied and could suggest sources of any differences found between teacher education students in the United Kingdom and the United States.

The problem and objectives of the study have been stated. The chapters which follow will provide a review of related literature, the procedures used in the research project, presentation of the data with corresponding analysis, descriptions of British and American teacher education programs, and the final conclusions to be drawn from this research effort.

Chapter II

REVIEW OF THE LITERATURE

A recent researcher in the field of comparative teacher education has stated that, "International perspective is one aspect somewhat lacking in assessment of teacher education."[7] The statement greatly underestimates the situation as the following review attests.

The earliest systematic research and analysis of specific problems in comparative teacher education appear to have begun early in the present century, with the first works of this period being two doctoral dissertations published in 1919 by I. L. Kandel and Peter Sandiford at Teachers College, Columbia University. Kandel dealt with the education of elementary school teachers in Germany, and Sandiford concerned himself with the education of teachers in England and Wales. Both of these studies were descriptive and not comparative in nature, and the example they set has been principally followed by all researchers in the field of comparative education since that time.

There have been comparative teacher education studies in scope and motive concerned with cross-cultural analysis but each has been of a descriptive nature, and no empirical research in comparative teacher education has actually been attempted. More will be presented on this subject later in this chapter, but any search of the related literature will immediately make evident the lack of attention to research in comparative teacher education. This fact has been noted by well-known writers in the field. For example, Brickman pointed out in 1956 that, "It is readily apparent that literature devoted to this area (comparative teacher education) is still in a more or less rudimentary status."[8] R. Freeman Butts stated, in an article on international perspective on teacher education, "Here is an interesting field for empirical research."[9] Finally, David G. Ryans, director of the monumental study on teacher characteristics in discussing a list of possible researches in the field, suggested a need for, "comparative studies of teacher characteristics . . . (involving) teachers of different national, political, and cultural backgrounds."[10]

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[7] Thomas TenHoeve, Jr., A Comparison of Certain Characteristics of Biological Science Teacher Trainees in the British Isles and the United States. (unpublished doctoral dissertation, University of Toledo, 1965.) p. 7.

The following review of literature, of necessity, will be divided into four broad areas. First, a brief review of American teacher education research directions will be discussed. Second, descriptive research comparisons will be presented with emphasis on United States and British teacher education systems. Third, literature providing indirect comparisons of teacher education in the United Kingdom and the United States will be reviewed. Fourth, related non-teacher education comparative studies will be considered. Finally, a brief summary will conclude the chapter.

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[8] William Brickman, "The Study of Problems of Teacher Education in Foreign Countries." The Journal of Teacher Education. 7:330, December 1956.

[9] R. Freeman Butts, "The Liberal Arts and Professional Education in the Preparation of Teachers: An International Perspective," The Educational Record 38:277, July 1957

[10] David G. Ryans, The Characteristics of Teachers, (Washington, D. C.: The American Council on Education, 1960.) p. 400.

American Teacher Education Research Directions

Excellent accounts comprising reviews of teacher education research or research related to teacher education exist.[11] A complete summary of these sources would be too exhausting and unnecessary for the purposes of this section. The interested reader may refer to these sources for a general account of research relating to teacher education. The purpose of this brief section is to review the directions of teacher education research as they have gradually come to light in the past few years. The reader is referred to the following general sources of information on such developments.[12] Of these accounts, perhaps those of Cyphert and Spaights and Openshaw most succinctly cover the subject.

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[11] Frederick R. Cyphert and Ernest Spaights, An Analysis and Projection of Research in Teacher Education. (U.S.O.E. Cooperative Research Project No. F-015, Columbus, Ohio: The Ohio State University Research Foundation, 1964.)

N. L. Gage, (Ed.), Handbook of Research on Teaching. (Chicago: Rand, NcNally and Co., 1963.)

W. S. Monroe (Ed.), The Encyclopedia of Educational Research. Third Edition. (New York: The Macmillan Co., 1960.) See pp. 1452-1491.

Review of Educational Research, "Teacher Personnel," Volumes 28, No. 3, June 1958 and 33, No. 4, October, 1963.

Cyphert and Spaights reviewed research in teacher education for a ten-year period. Smith, after examining the results of this review, indicated that research workers, generally, have concentrated on four principal areas of concern: (1) Present practices in teacher education, (2) the elements of personality associated with different kinds of teaching behavior, (3) the aspects of training and experience associated with different kinds of teaching behavior or criteria of teaching success, and (4) the comparative effects of different ways of training teachers and other educational personnel.[13] Cyphert and Spaights then indicated that a fifth area of investigation has emerged, namely, the development of means or systems for recording phenomena of teacher behavior to arrive at, as one approach, the nature of desirable teacher education content and the selection of such content. Although, in no area of research have research efforts or possibilities been completely exhausted, Cyphert and Spaights have contended that research work in areas other than the latter have proved, generally, inconclusive and that the proper direction for future teacher education research lies in the fifth area of investigation which they have advocated.[14]

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[12] A. S. Barr, Teacher Effectiveness: A Summary of Investigations. (Madison, Wisconsin: Dembar Publications, 1961.)

Bruce J. Biddle and William J. Ellena, (Eds.), Contemporary Research on Teacher Effectiveness. (New York: Holt, Rinehart and Winston, 1964.)

Cyphert and Spaights, Loc. Cit.

Karl Openshaw, "The Corkscrew Path," Journal of Teacher Education, 16:233-27, June 1965.

Harry F. Silberman, (Ed.), "A Symposium on Current Research on Classroom Behavior of Teachers and Its Implications for Teacher Education." The Journal of Teacher Education, 14:235-325, September 1963

[13] Cyphert and Spaights, Op, Cit. pp. 105-6

Openshaw, in his article on current research in teacher education, dealt with what he called the paradox of our time, "that the education of teachers as teachers continues to be viewed as a baseless art rather than an area for careful and intensive research effort."[15] He further claimed that a science of teaching has yet to evolve and that "the practitioner of any profession, to function adequately, must be educated to select appropriate methods of handling persons, subjects, or substances, depending upon the profession. The value of any program of preparation, then, rests upon the validity of the selections; else the preparation is superfluous."[16] Beginning with this theme, Openshaw neatly traced research efforts in teacher education to promote his thesis. He first indicated that much of what has been reported as teacher education research consisted of normative surveys or comparisons of program, methods, and practices, and that this information has tended to serve as a primary knowledge base for the practice of teacher education. His further consideration of teacher research literature indicated that there has been considerable research activity on the study of teacher characteristics and attitudes and their possible relationship to teaching effectiveness. In this respect, he cited research reviews and efforts by a series of authors[17] and ended with the conclusion that such efforts have tended to define teaching and the approaches to educating teachers in too narrow a fashion. Openshaw pointed out that much of what we now think about teaching has evolved from theories of learning and are justified by an appeal to philosophical conceptions and notions of the school as a social system. He stated that "The bounds of psychology are too narrow for coping with the complexities of the teaching-learning situation in the schools of today."[18] Openshaw then concerned himself with studies focused on teaching behavior as observed or recorded in classroom settings. These he divided into three major categories: "(1) those dealing with psychological climate, (2) those describing teacher behavior quantitatively, and (3) those dealing with selected cognitive learning objectives."[19]

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[14] Ibid. Chapter 5.

[15] Karl Openshaw, Loc, Cit. p.233.

[16] Ibid.

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[17] *Ibid.*, p. 235.

A. S. Barr, *Teacher Effectiveness: A Summary of Investigations.* (Madison, Wisconsin: Dembar Publications, 1961.)

A. S. Barr, and R. E. Jones, "The Measurement and Prediction of Teaching Efficiency." *Review of Educational Research*, 28: 256-64; June 1958.

H. E. Metze, and C. F. Gross, *A Critical Review of the Development of Pupil Growth Criteria in Studies of Teacher Effectiveness.* Research Series No. 31. (New York: Office of Research and Evaluation, Division of Teacher Education, Board of Higher Education of the City of New York, 1956.)

G. F. Leiderman, T. L. Hilton, and H. Levin, "Studies of Teachers' Behavior: A Summary Report." *The Journal of Teacher Education*, 8:433-37; December 1957.

D. V. Tiedeman, and M. Cogan, "New Horizons in Educational Research," *Phi Delta Kappan*, 39:286-91; March 1958.

D. G. Ryans, *Characteristics of Teachers*. (Washington, D. C.: American Council on Education, 1960.)

D. G. Ryans, "Prediction of Teacher Effectiveness," *Encyclopedia of Educational Research*. Third edition. (New York: Macmillan Co., 1960.) pp. 1486-91.

W. A. Watters, "Annotated Bibliography of Publications Related to Teacher Evaluation," *Journal of Experimental Education* 22:351-67; June 1954.

J. W. Getzels, and P. W. Jackson, "The Teacher Personality and Characteristics." *Handbook of Research on Teaching*. (Chicago: Rand McNally and Co.,1963.) p. 574

Studies of psychological climate included the work of Anderson,

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[18] Ibid.

[19] Ibid.

Lippitt and White, Withall, Flanders, Hughes, and Thelen.[20] These investigations began with definitions of classroom climate and progressed to early attempts by Lippitt and White and Withall to develop classification categories for the types of teachers' verbal statements. Such work was followed by Flanders' system of interaction analysis, Hughes' scales for determining effective teaching by function on the elementary school level, and Thelen's concept of teachability grouping. These were all attempts to describe observed classroom behavior and did not represent any establishment of relationships existing between the behavior of teachers and that of learners.

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[20] Ibid., pp. 235-6.

Harold H. Anderson, and Helen M. Brewer, Studies of Teachers' Classroom Personalities. 1: Dominative and Socially Integrative Behavior of Kindergarten Teachers. Applied Psychology Monographs 6. (Stanford, California: Stanford University Press, 1945.)

Ronald Lippitt, and R. I. White, "Patterns of Aggressive Behavior in Experimentally Created 'Social Climes'." Journal of Social Psychology, 10, 1939.

J. Withall, "The Development of a Technique for the Measurement of Social-Emotional Climate in Classroom." Journal of Experimental Education, 17:347-61; March 1949.

N. A. Flanders, Teacher Influence, Pupil Attitudes and Achievement: Studies in Interactions Analysis. U.S.O.E. Cooperative Research Project No. 397. (Minneapolis: University of Minnesota, 1960.) (Mimeographed)

Marie Hughes, Development of the Means for the Assessment of the Quality of Teaching in Elementary Schools. (Salt Lake City: University of Utah Press, 1959.) (Mimeographed)

H. A. Thelen, et. al., Teachability Grouping. (Chicago: University of Chicago, 1961.) (Mimeographed)

Quantitative descriptions of teacher behavior have been reported by such investigators as Medley and Mitzel and Travers and Walen.[21] Openshaw stated that the results of these researchers' efforts is the conclusion, "that an acceptable model for testing teaching must also include learner response as the dependent variable."[22]

The analysis by Openshaw continued with a discussion of studies dealing with selected cognitive learning objectives. In this category he cited the work of Smith and Meux, Bellack, Aschner, Wright and Proctor, Miller, and Taba.[23] All of these studies have been attempts to investigate certain aspects of classroom behavior from different logical and psychological points of view. The effort in each case was to focus upon the dynamics of the classroom to better understand teaching and learning. These efforts have not resulted at present in a theory of teaching which, when applied, can result in the prediction of student achievement. Openshaw concluded that his analysis indicated,

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[21] Ibid., p 236.

D. M. Medley, and H. E. Mitzel, Improvement of Student Teaching. (New York: University of New York, 1962.) (Mimeographed).

R. M. W. Travers, et. al., Measured Needs of Teachers and Their Behavior in the Classroom. (Salt Lake City, Utah: University of Utah, 1961.) (Mimeographed)

[22] Ibid.

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[23] *Ibid.*

B. O. Smith, "A Concept of Teaching." *Teachers College Record* 61:229-41; February 1960.

B. O. Smith, and Milton G. Meux, *A Study of the Logic of Teaching*. U.S.O.E. Cooperative Research Project No. 258. (Urbana, Illinois: Bureau of Educational Research, University of Illinois, 1962.) (Multilithed)

Arno A. Bellack, and Joel R. Davitz, *The Language of Classroom, Meanings Communicated in High School Teaching*. U.S.O.E. Cooperative Research Project No. 1497. (New York: Columbia University, 1963.) (Mimeographed)

Arno A. Bellack, *Theory and Research in Teaching*. (New York Bureau of Publications, Teachers College, Columbia University, 1963.)

Mary J. Aschner, *The Analysis of Classroom Discourse. A Method and Its Uses*." Unpublished doctoral dissertation. (Urbana, Illinois: University of Illinois, 1958.)

Mary J. Aschner, et. al., *A System for Classifying Thought Processes in the Context of Classroom Verbal Interaction*. (Urbana, Illinois: Institute for Research on Exceptional Children, University of Illinois, 1962.) (Mimeographed)

E. Muriel J. Wright, and Virginia H. Proctor, *Systematic Observation of Verbal Interaction as a Method of Comparing Mathematics Lessons*. (St. Louis, Missouri: Washington University, 1961.) (Mimeographed)

George L. Miller, *An Investigation of Teaching Behavior and Pupil Thinking*. (Salt Lake City, Utah: Wm. M. Stewart School, University of Utah, 1964.) (Mimeographed)

Hilda Taba, Samuel Levine, and Freeman F. Elzey, *Thinking in Elementary School Children*. U.S.O.E. Cooperative Research Project No. 1574. (San Francisco, Calif.: San Francisco State College, 1964.) (Mimeographed)

> that research efforts thus far have failed to achieve a conceptual interlock, that is, they have not developed into a functional systemization of knowledge about teacher education. Rather, they have sought to improve practice without first developing an understanding of what it means actually to teach...what a teacher says and does and how he behaves as he performs a range of teaching tasks must be determined before an understanding of learner behavior possibilities and probabilities can be gained. What is needed is a body of descriptive data that will provide knowledge of these relationships....If knowledge of the dynamics of teacher education could be enlarged...the paradox of our time would no longer be ignored...Teacher educators would claim the discipline of education as their own. Programs of preparation would be developed from solid foundations, voices of the naive critic would be silenced, and the existing paradox resolved.[24]

There is no doubt that research in the directions urged by Cyphert and Spaights and Openshaw will be useful in the field of teacher education. However, such viewpoints which attempt to narrow the direction of teacher education research to a single effort appear to lose some sight of the desirability of research which offers any investigator the opportunity to probe into new fields of endeavor and to cast new light on previous research findings. The new directions of research in teacher education, pointed out by Openshaw and others, should not mark the scope or boundary of teacher education research. In no research area have research efforts or possibilities been completely exhausted.

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[24] _Ibid_. p. 237.

What is most interesting in this account of new directions in teacher education research in the United States is the fact that no research is reported of a cross-cultural or cross-national nature. Current American researchers in teacher education appear to have either abandoned this direction of inquiry or to have forgotten about it. Thus, another new research direction in teacher education appears possible and profitable.

Descriptive Research Comparisons in Teacher Education

Comparative education authorities, such as Kandel, Mallinson, Hans, King, Sandiford, and others have contributed much to the literature concerning the educational systems of the United Kingdom and the United States. These writings include statements on the means and methods by which teachers are prepared in various countries. For a representative sample of this kind of writing, attention is directed to Kandel's *New Era in Education*.[25] These studies have been vertical in nature and have provided a descriptive analysis of teacher preparation programs. No effort to analyze the products of these programs has been attempted.

Comparative education studies of a horizontal type, where teacher education programs of two or more countries are compared using descriptive methods, are not frequent in the published literature. Research most often reported has been observational in nature and not based on specific statistical research design. Writings in the field deal principally with the structure, pattern, and general impressions of teacher education programs obtained from a study of college catalogs, personal interviews with teacher educators, and visits to various teacher education institutions.

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[25] Isaac L. Kandel, *The New Era in Education* (Boston: Houghton-Mifflin, Co., 1955.)

A typical descriptive account of teacher training in England and Wales and the United States appears in the 1963 Yearbook of Education.[26] In this volume G. Baron has written an article on "The Training of Teachers in England and Wales." Baron has discussed the administrative structure of teacher training, the role of the Ministry of Education, grants to students, selection of students, training colleges and courses of study, staffs of the colleges, university departments of education, and problems current to teacher training as they appeared to him in 1963. In his presentation, Baron omits any discussion of Scotland and Northern Ireland and has stated that, "The systems of education in Scotland and Northern Ireland differ substantially from that which embraces England and Wales."[27] In the same volume, Willard S. Elsbree has made an attempt to cover the same area of discussion as Baron. Elsbree has traced the development of teacher training in the United States from 1800 up to the present time.

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[26] George Z. F. Bereday, and Joseph Lauwerys, (Eds.), The Education and Training of Teachers (New York: Harcourt, Brace, & World, Inc., 1963.)

[27] Ibid., p. 137

His account deals with the rise of the normal school, the Civil War and post-Civil War expansion in education, preparation of teachers after 1900, and the development of the last fifty years of teacher education. Elsbree's concluding statement made the following predictions: (1) A raising of standards through more accurate accreditation practices, (2) more research on what makes a good teacher, (3) increasing effort to develop more adequate national goals bearing on the training of teachers.

R. Freeman Butts personally visited, in 1954, teacher education institutions in England, France, Italy, Ceylon, and Australia. He made a record of his impressions of these observations and came to the following interesting conclusion:

> In general, I felt that those who conducted the training of elementary teachers looked upon professional training rather narrowly. They over-emphasized the methods of teaching and practice teaching and failed to provide a broad background of university-level work in general academic education and in the foundations of education. On the other hand, those who conducted the training of secondary teachers over-emphasized the academic backgrounds of scholarship in a specialized field of competence to the neglect of a broad liberal education and the technical skills of teaching. As a result, I felt, that both types of training had considerable merit as far as they went but they failed to achieve a desired balance of scholarship, professional skill, social responsibility, and the personal development of the teacher.[28]

In respect to British teacher education, Butts thought that work in professional education did not differ markedly from similar work in the United

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[28] R. Freeman Butts, "The Liberal Arts and Professional Education in the Preparation of Teachers: An International Perspective," The Educational Record. 38:266, July 1957.

States. He stated, "It may be more academically oriented and it may understress the social, historical, and philosophical foundations as found in the better American universities and colleges...the English student may have specialized in fewer fields and therefore may well have achieved a higher standard of accomplishment in those fields of specialization."[29]

Another research study in comparative education frequently referred to is that of Richardson, Brule, and Snyder on _The Education of Teachers in England, France, and the United States_.[30] This volume has presented accounts of teacher education for each of the three countries mentioned in the title. Richardson, who was then associated with the Ministry of Education in England, gave a complete description of the training of teachers in England and Wales which covered training institutions, area training organizations, students, staff members, training courses, post-initial training, the status and prospects of the teacher in England and Wales, and a brief discussion of emergency training schemes. Snyder edited the section of the book dealing with the education of teachers for the public schools of the United States. This account has included a discussion of the history of American teacher education, the control and finance of teacher education in the United States, curriculum trends and instructional issues in teacher education, and the economic, social, civic, and political status of teachers. Both accounts are similar in scope and design to the previously mentioned discussions of teacher education found in the *1963 Yearbook of Education*.

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[29] _Ibid._, p. 272

[30] C. A. Richardson, Helene Brule, and Harold E. Snyder, _The Education of Teachers in England, France, and the United States_ (Paris: UNESCO, 1953.)

In 1939 the National Council of Teachers of Mathematics, in its Fourteenth Yearbook, published *The Training of Mathematics Teachers for Secondary Schools in England and Wales and in the United States*.[31] This study by Turner was based on teacher training institution catalogs, questionnaires, reports of accrediting agencies, and selected visits to teacher education institutions in England and Wales and the United States. No effort was made to test the level of preparation of the prospective teachers. Northern Ireland and Scotland were not included in the study sample. Turner concluded that mathematics teachers prepared in England and Wales received more training in basic mathematics courses and less in the professional education courses than the teachers prepared in the United States. More importance was given to practice teaching in England than in the United States. Turner concluded that educators in England and Wales believed preparation in the subject matter was of most importance and that a measure of professional training was desirable but should be taken after completion of academic training. He found in the United States that subject matter preparation was recognized as important but that teacher education institutions did not give it the all-important place in the teacher education program. The American system tried to help the teacher make his optimum contribution to the whole development of the pupil. Turner found that teacher selection practices were in harmony with the social philosophies of both countries.

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[31] Ivan Stewart Turner, *The Training of Mathematics Teachers for Secondary Schools in England and Wales and in the United States* (New York: Bureau of Publications, Teachers College, Columbia University, 1939.)

Rampel reported a study comparing the relative status of United States and Canadian teachers. This research dealt principally with teachers' salaries and salary schedules. He reported that salaries for high school teachers are a little higher in Canada than in the United States, on the average, but salaries for elementary school teachers are considerably higher in the United States. These differentials were attributed, largely, to differences in certification requirements for the two countries, as preparation for elementary teaching in Canada typically consisted of high school graduation and one year of professional training.[32]

A search of the literature failed to reveal any further direct comparisons between American and British teacher education systems. However, there have been a number of descriptions written concerning various aspects of teacher education programs in Great Britain in recent years.

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[32] A. M. Rampel, "The Relative Status of U. S. and Canadian Teachers," Phi Delta Kappan, 42:296-301, April 1961.

Pugh has provided the broad outlines for the preparation of teachers in British Schools in Improving College and University Teaching.[33] Pugh has pointed to the differences in preparation in the training schools and in the universities. Although he does not make comparisons with the United States patterns of preparation, the exact spelling out of typical British teacher education programs holds significance for a study which concentrates upon a comparison between United States and British preparation patterns. Pugh has indicated that the typical British training college requires courses in psychology, philosophy, sociology of education, health, spoken and written English, elementary mathematics, and teaching practice. In addition, the trainee must also enroll in one introductory and one advanced course in his choice of lectures in chemistry, dramatic arts, English history, geography, general and natural sciences, mathematics, music, physics, physical education, or religious knowledge. In the university pattern of preparation, the student, upon completion of three years of study in a subject area in depth, enrolls in principles of education, educational psychology, health education, history of English education, general methods of teaching, special methods of teaching, and practice teaching.

Morris has written of the educational change in the United Kingdom since World War II and has indicated that the gravest issue in British teacher education has been the problem of recruitment and maintaining the size of the teaching force where most needed.[34] However, this problem has not prevented significant advances in the quality and length of training for teachers. Writing on a related subject, Ketcham has discussed the selection of students for teacher preparation in the British Isles. He stated that, "British education is still dominated by the selection of a minority for magnificent educational opportunities and the relegation of the vast majority of young people to what the remaining balance in the national budget will buy."[35] This statement by Ketcham will undoubtedly lose some of its validity as the plans for a general revitalization of British education are attempted. Another late account of education in Great Britain, which also covers the education of teachers, appeared in Smith's book on the subject.[36]

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[33] Albert Pugh, "Teacher Preparation in England," Improving College and University Teaching, 12:121-2, Spring 1964.

Similar accounts of an earlier vintage are those by Dent and Alexander. Dent, writing in Growth in English Education,[37] along with others such as Morris and Niblett, have revealed quantitative and organizational changes that have taken place in the preparation of teachers in the British Isles. Alexander has provided an over-all view of education as seen through the eyes of an English writer.[38] Robbins visited teacher education institutions in England and Wales and has provided a late report on teacher education programs and the professional standards movement.[39] These writings, however, have not presented patterns which would provide an objective comparison of the intellectual and personal characteristics of teachers in the British Isles.

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[34] Ben Morris, "Educational Change in the United Kingdom Since World War II," Phi Delta Kappan, 43:92-97, November 1961.

[35] Warren A. Ketcham, "A Comparison of the British Secondary School and the American High School," Education in England U.S.O.E. (E-14061). (Washington, D. C., 1961.) p. 43.

[36] W. O. Lester Smith, Education in Great Britain (London: Oxford University Press, 1964)

[37] H. C. Dent, Growth in English Education, 1924-1952 (London: Routledge and Kegan, Paul, Ltd., 1954)

Of the statistically oriented studies in teacher education within a country, two can be noted in respect to British teacher education. Clark and Nisbet investigated the experiences of Scottish teachers during their first two years of teaching as well as their attitudes toward their courses of training. Their questionnaire survey of a sample of Scottish teachers indicated that teaching practice, teaching methods courses, and educational science (education and psychology) were rated in that order as the most frequently mentioned valuable aspects of training. Subject specialists also gave a high place in their general courses in special subjects. Other aspects of their courses, intended to further their general education and to foster professional insight, were often regarded as a waste of time. Clark and Nisbet concluded that teachers tended to regard teacher training as essentially a matter of learning the techniques of teaching. These investigators stated, "If this is indeed the teachers' 'image' of training, then it is in sharp contrast to the trend in many colleges to develop and extend the higher education of students. Attempts to develop teacher training as a form of higher education in its own right are likely to lead to greater discontent among students unless this narrow view of the essential function of teacher training -- that it is a matter of learning how to run a class -- can be modified."[40]

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[38] W. P. Alexander, Education in England (New York: St. Martin's Press, 1954.)

[39] G. D. Robbins, Teacher Education and Professional Standards in England and Wales (Columbus, Ohio: Ohio State University Press, 1963.)

The second statistically oriented study by Evans[41] tested 109 students in a university training department with four instruments: (1) Moray House Adult Intelligence Test, (2) Raven's Progressive Matrices, (3) Minnesota Teacher Attitude Inventory, and (4) Teachers and Teaching, a test of attitude toward teaching as a career. She then correlated the results of these tests with the marks awarded to the students in practice teaching and in theory of education at the end of the year. Evans found that none of the tests gave significant correlations with practice teaching marks, but the first three tests gave correlations significant at the five per cent level with the theory of education marks. She further found that the results of the Minnesota Teacher Attitude Inventory did not correspond either to American or Canadian norms. Scores on the inventory, however, were significantly correlated with the results of the Progressive Matrices Test but not with the Moray House test. Evans concluded that, "No evidence is offered here of the value of the inventory as a criterion of the efficiency of trained and experienced teachers. Its authors claim that it does discriminate well between more or less efficient teachers in American schools. It might prove equally satisfactory as a criterion of practical teaching efficiency with teachers in this country who had developed their techniques of child-handling more fully than students could be expected to do during their training year."[42]

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[40] R. Peter Clark and John D. Nisbet, The First Two Years of Teaching (Aberdeen College of Education and Department of Education, University of Aberdeen, Scotland, September 1963) p. 16. (Mimeographed)

[41] K. M. Evans, "An Examination of the Minnesota Teacher Attitude Inventory," British Journal of Educational Psychology, 23:253-256, November 1958.

Indirect Comparisons in Teacher Education

Understanding of comparative teacher education can be increased through reference to source material indirectly related to the subject. A brief discussion of such literature is presented in this section in order to provide background information in respect to a comparison of teacher education in the United Kingdom and the United States.

The first of a series of annual conferences on comparative education, sponsored by the School of Education of New York University, had as its subject The Role of Comparative Education in the Education of Teachers.[43] The conference dealt principally with observations concerning the study of comparative education and the training of professors of comparative education. It made a plea to include a study of comparative education in teacher education programs.

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[42] Ibid., p. 256

[43] William W. Brickman, (Ed.), The Role of Comparative Education in the Education of Teachers (New York: School of Education, New York University, 1954)

There have been many articles written on teacher education in various countries. A sample of such writings readily available in United States publications is footnoted below.[44] All of these accounts

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[44] George Z. F. Bereday, "The Social Dilemma in the Education of Teachers in Western Europe," The Journal of Teacher Education, 7:293-303, December 1956.

William H. E. Johnson, "Teacher Education in the U.S.S.R. and Eastern Europe," The Journal of Teacher Education, 7:304-11, December 1956.

Michael Chiapetta, "Problems of Teacher Education in Latin America," The Journal of Teacher Education, 7:312-15, December 1956.

A. Douglas Pugh, "Issues and Trends in Arab Teacher Education," The Journal of Teacher Education 7:316-22, December 1956.

David G. Scanlon, "Problems of Teacher Training in Africa South of the Sahara," The Journal of Teacher Education, 7:323-28, December 1956.

John Georgeoff, "The Training of Elementary Teachers in Yugoslavia," The Journal of Teacher Education, 16:29-35, March 1965.

John R. Beery, "Teacher Education in West Germany," The Journal of Teacher Education 16:61-68, March 1965.

John B. Whitelaw and Clarence B. Lindquist, "The Continuing Challenge of Soviet Teacher Education--1963," The Journal of Teacher Education, 14:119-29, June 1963.

Burton W. Gorman, "What Can We Learn from the Swiss Schools?" Phi Delta Kappan, 39:346-49, May 1958.

"Africa -- Its Educational Problems and Promises," Phi Delta Kappan, Vol. 41. No. 4, January 1960.

Gerald Read, "Trends and Problems in Soviet Education," Phi Delta Kappan, 42:48-51, November 1960.

Lionel Elvin, "An Introduction to Reform in West Europe's Post-Primary Education," *Phi Delta Kappan* 43:50-3, November 1961,

J. Dahlmann-Hansen, "The Transformation of Schools in Denmark," *Phi Delta Kappan*, 43:54-9, November 1961.

Roger Gal, "The Development of Education in France--1945 to 1961," *Phi Delta Kappan*, 43:60-3, November 1961.

Walter Schultze, "Recent Changes in the Secondary Schools, Federal Republic of Germany," *Phi Delta Kappan* 43:64-8, November 1961.

Andreas M. Kazamias, "The Style of Educational Change in Greece," *Phi Delta Kappan*, 43:69-74, November 1961.

Luigi Volpicelli, "The Italian School System from 1950 to 1960," *Phi Delta Kappan*, 43:75-82, November 1961.

M. Goote and William Lynch, "The Netherlands: A Democracy Reconciles Tradition and Reform in Its Secondary Schools," *Phi Delta Kappan*, 43:81-5, November 1961.

Torsten Husen, "School Reform in Sweden: A Liberal Democracy Adopts the Comprehensive School System," *Phi Delta Kappan*, 43:86-91, November 1961.

Ben Morris, "Educational Change in the United Kingdom Since World War II," *Phi Delta Kappan*, 43:92-7, November 1961.

Lester Sands, "Teacher Education and Teacher Status in Latin America," *Phi Delta Kappan*, 45:183-5, January 1964, (Also, see pages 186-8 same issue).

are descriptive in nature and relate either impressions and information gained by persons visiting the educational systems of various countries or are reports by educational experts of a particular country in respect to some portion of the country's educational system. A perusal of these accounts will supply any reader with an overview concerning the present state and anticipated future of teacher education worldwide.

Another source of indirect information concerning teacher education for various countries is contained in doctoral dissertations completed principally by foreign doctoral students in United States universities. A listing of dissertations which is issued yearly by The Journal of Teacher Education provides a bibliography of doctoral studies on the education of teachers and administrators. Each bibliography has a section titled, "Teacher Education in Other Countries" which contains a yearly list of dissertations completed on the topic. An example of these bibliographies are those carried in two issues of The Journal of Teacher Education.[45] Dissertations on teacher education in other countries have dealt consistently with historical reviews of education, educational development in a particular country, concern with entrance examinations to colleges of education, preparation of teachers for a particular subject matter teaching field, development of professional education curriculums, and a variety of other topics. Comparative studies in teacher education are usually not attempted and within-a-country research is the usual content of such literature.

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[45] Dorothy C. S. Laird and Helen C. Ellis, "Doctoral Studies on the Education of Teachers and Administrators, 1961-62." The Journal of Teacher Education 14:334-336, September 1963.

Dorothy C. S. Laird and Helen C. Ellis, "Doctoral Studies on the Education of Teachers and Administrators, 1962-63," The Journal of Teacher Education 15:329-336, September 1964.

Of greater significance to research in teacher education is an issue of the Review of Educational Research devoted to research in countries other than the United States.[46] This issue of the Review presented an excellent account of research activity and educational thinking in Australia and New Zealand, Canada, Chile, Peru, Puerto Rico, Japan, Israel, East Africa, Belgium, France, Switzerland, West Germany, Finland, Sweden, Yugoslavia, Poland, Spain, and the United Kingdom. The article on the United Kingdom by W. D. Wall and K. M. Miller[47] indicated that research in that country has become more coherent, more interdisciplinary, and more long-term in its objectives than previously. The article clearly indicated that a research climate had been established for the type of research being attempted in the present project.

Of great significance in any account of literature providing indirect comparisons of teacher education in the United States and the United Kingdom was a volume commonly referred to as the "Robbins Report."[48]

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[46] "Educational Research in Countries Other than the United States," Review of Educational Research Vol. 32, No. 3, June 1962.

[47] W. D. Wall and K. M. Miller, "The United Kingdom," Review of Educational Research 32:354-360, June 1962.

[48] Professor Lord Robbins, et. al., Higher Education: Report of the Committee Appointed by the Prime Minister Under the Chairmanship of Lord Robbins, 1961-63. (London: Her Majesty's Stationery Office, October 1963.)

This report contained a study conducted from 1961 to 1963 on all aspects of higher education in the United Kingdom. This complete review of higher education in Great Britain was assembled for and reported to Her Majesty's Government.

The Robbins Report consisted of nineteen chapters and five appendices, three of which were published with the report and two published at a later date. Of particular concern to teacher educators are Chapters IX (on colleges for education and training of teachers), XIII (on teachers and students), and the final chapter of recommendations, Chapter XIX. These sections of the report tended to compare, indirectly, teacher training in Great Britain, the United States, and the U.S.S.R., with the point consistently made that modern societies cannot achieve economic growth and higher cultural standards without making the most of the talents of their citizens. Further, the principle of equal academic awards for equal performance was stressed and there was a demand that each branch of the higher education system produce as much excellence as possible. More specifically, the report called for an increase in the size of the teacher training colleges in England and Wales and encouraged these three-year colleges to begin thinking about the possibility of granting degrees for four years of training. The report made it clear that three-year courses leading to professional qualifications for teaching should continue to be available but that four-year courses, leading to both a degree and professional qualification, should be provided in the training colleges for the more able students who could profit from such a program. The report recommended an even closer association between the training colleges and the universities than is presently the case. In this respect, transfer to the university from the training colleges would be made possible. The net result, if such recommendations were followed, would be a considerable upgrading of the three-year teacher training colleges and a more respectable position for teacher education in the complete organization of British higher education.

The Robbins Report also looked at the problem of how to accommodate the increasing number of students who will need higher education by 1980. Also supported was the idea that degree graduates should be provided with a better and broader general education than is usually possible in the British university system. In general, the sections of the report dealing with teacher education indicated that the future directions of such education in Great Britain will become increasingly similar to those pioneered by higher institutions in the United States.

In two articles, Lionel Elvin, of the Institute of Education of the University of London, assessed the Robbins Report, its impact upon higher education, and answered the critics within the British Isles.[49] Elvin reported that the London Times accused the Robbins Report of being under American influences. He suggested that the Robbins Committee may have been influenced by the "California Master Plan" along with the growth of the junior college movement in the United States.

Another article on the same subject was that of Hutton's in School and

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[49] Lionel Elvin, "The Robbins Report, Higher Education in Britain," Teachers College Record 65:512-519, March 1964.

Lionel Elvin, "The Education and Training of Teachers in England," Teachers College Record 66:153-161, November 1964.

Society.[50] Hutton supported the recommendations of the Robbins Report in assessing the 1961 directive by Sir David Eccles, Her Majesty's Minister of Education, which required professional training for all teachers in the British Isles.

Related Empirical Comparative Research

Comparative education research of an empirical nature does not appear in comparisons of teacher education systems or products but has occurred in comparing the educational achievement of children of different nationalities. Such research has been somewhat sporadic and inconclusive. For example, a study by Buswell in 1958 indicated that English children made significantly higher scores than California pupils of the same chronological age when using an adapted form of a British achievement test.[51] Tracy, using the same British tests, reported that North Carolina white pupils at the same completion stage of arithmetic study as their British counterparts received approximately the same mean test scores.[52] A third study by Bogut replicated Buswell's using elementary children from St. Paul, Minnesota and a comparable British sample. Bogut found that St. Paul students had lower means on the computational portion of the test and higher and more comparable means with the British sample on the problem portions of the arithmetic achievement test.[53] Most comparative research of this nature has been performed in the field of mathematics as most researchers have felt that a minimum of cultural bias was reflected in research involving this academic area.

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[50] Harry Hutton, "Compulsory Professional Teacher Training in England," School and Society 92:358-359, November 1964.

[51] G. T. Buswell, "Comparison of Achievement in Arithmetic in England and Central California," Arithmetic Teacher 5:1-9, February 1958.

[52] N. H. Tracy, "Comparisons of Test Results: North Carolina, California, and England," Arithmetic Teacher 6:199-202, October 1959.

Research outside of the mathematics area has been performed, however, and four groups of studies described below are representative.

In several studies national test norms on an achievement test developed in one country were compared with the performance of pupils in another country. Taylor,[54] in 1950 administered metropolitan readiness tests to children in Scotland. These pupils achieved a mean age score approximately one year and two months above the American norm for their age-ability group. Scholl conducted two studies of this nature.[55] In the spelling portion of the study, Scholl administered the paragraph meaning, word meaning, and spelling subtests of the Stanford Achievement Battery to a group of English children, ages 7-13. The English children performed above the norms on all tests at all ages with one exception, the paragraph meaning test where only seven-year olds excelled. Scholl's second study involved the performances of American children, ages 7-11, on the survey reading tests of the National Foundation for Educational Research in England and Wales. The results showed that the American sample fell below the English norms at all age levels.

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[53] T. L. Bogut, "Comparisons of Achievement in Arithmetic in England, California, and St. Paul," *Arithmetic Teacher* 6:87-94, March 1959.

[54] Christian D. Taylor, "The Effect of Training on Reading Readiness," *Studies in Reading* Vol. 2 (London: The University of London Press, Ltd., 1950.)

[55] Geraldine T. Scholl, *The Reading and Spelling Achievement of a Group of English Children as Judged by the Standards of an American Achievement* (Unpublished doctoral dissertation University of Michigan, 1960.)

Anderson and others[56] completed a study on "Comparisons of the Reading and Spelling Achievement and Quality of Handwriting of Groups of Scottish and American Children." The sample tested included children 7, 11, and 14 years of age from a section of Scotland, a county in Florida, and Jackson, Michigan. Seven-year-old Scottish children had the higher standard of attainment on all tests. The same results were evident at age eleven. At age fourteen, however, American students were significantly higher in the paragraph and word meaning tests.

Preston,[57] in a unique study, compared results on two types of reading comprehension tests with fourth and sixth grade pupils in Weisbaden, Germany and Philadelphia, Pennsylvania. The results indicated that the mean American scores in reading comprehension for three or four subgroups were higher than the corresponding German mean scores. Preston concluded that the data for the research did not justify unqualified and sweeping statements made elsewhere to the effect that German children were superior in reading to American children, or that there was a greater incidence of reading retardation in German children than American children.

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[56] Irving H. Anderson, Comparisons of the Reading and Spelling Achievement and Quality of Handwriting of Groups of English, Scottish, and American Children, U.S.O.E. Cooperative Research Project No. 1903 (The University of Michigan, 1963.)

[57] Ralph C. Preston, "Reading Achievement of German and American Children," School and Society 90:350-54, October 20, 1962.

A study of great significance to empirical research in comparative education was competed by an international team of experts on the educational achievements of thirteen-year old pupils in twelve countries--Belgium, England, Finland, France, Israel, Poland, Scotland, Sweden, Switzerland, United States, West Germany, and Yugoslavia.[58] This research, which was reported by Foshay, Thorndike, Hotyat, Pidgeon, and Walker, was an important breakthrough in proving that a large scale study could be performed introducing a large empirical element into the field of comparative education. The research sought to determine whether some indications of the intellectual functioning behind responses to short-answer tests could be deduced from an examination of the patterning of such responses from many countries. A total of 9,918 pupils were tested in reading comprehension, mathematics, science, and geography. The results showed that children of various nations were strong in some subjects and weak in others. French-speaking pupils were superior in mathematics, while those from English-speaking countries were consistently poor. Yugoslavian children led those of all countries on the reading comprehension test, and Belgian and Polish pupils did relatively poorly in this reading skill. Children of Germany, Israel, and Poland were superior in geography, and again English-speaking pupils did not do well in this field. Students in the United States and Germany were superior in science and in this subject French, and especially Swiss children, obtained the lowest scores.

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[58] Arthur W. Foshay and others, Educational Achievements of Thirteen-Year-Olds in Twelve Countries (Hamburg: UNESCO Institute for Education, 1962.)

As a result of the foregoing research adventure, a slightly modified group formed itself officially into a project known as "The International Project for the Evaluation of Educational Achievement," (I.E.A.). As of the present date, nothing has been published describing the project, although various members of the project research team reported orally on the progress of the research at the February 1965 meeting of the American Educational Research Association in Chicago. The countries participating in the project are Australia, Belgium, England, Finland, France, Germany, Israel, Japan, Netherlands, Scotland, Sweden and the United States. Each country is represented on an international council by a senior member of a leading research institute of the nation involved. The representatives from each country are Australia, William C. Radford; Belgium, F. Hotyat; England, D. A. Pidgeon; Finland, M. I. Takala; France, G. Mialaret; Germany, W. Schultze; Israel, M. Smilansky; Japan, M. Hiratsuka; Netherlands, S. Wiergersma; Scotland, D. A. Walker; Sweden, T. Husen; United States, B. S. Bloom.

The project, which developed from international meetings begun in June 1959, took as its first subject matter mathematics achievement. In addition, the researchers are creating a research and conceptual model which will relate a study of mathematics to larger social-political-educational issues and changes. The conceptual model consists of a set of six terms which express a large set of ideas which the researchers hope to interrelate with their investigations. These major terms in the conceptual model are: values and philosophy, policy, educational practices, cognitive learning outcomes, affective learning outcomes, and general attitudes and values. The sources of data for the project are: mathematics tests and student opinions and questionnaires from 13-year-old and pre-university students in each country, a teacher questionnaire, teacher ratings of mathematics test questions, school information, and national information. The IEA Study represents a massive, major attempt to study quantitatively educational problems on an international basis.[59]

A final empirical research project, which has just been completed, is the _Comparative Study of Academic Achievement of Elementary Age Students of the United States and the British Isles._[60] Gibson and his associates have compared the achievement levels of British and United States elementary school students in (1) grades one through six, (2) of varying ability levels, (3) from both private and public schools, and (4) at the approximate beginning, middle, and end of the academic year. Achievement in the areas of reading vocabulary, reading comprehension, arithmetic reasoning, arithmetic fundamentals, mechanics of

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[59] Statement on I.E.A. Project Supplied Through Correspondence with N. Postlethwaite, Coordinator of the I.E.A. Project.

[60] Robert L. Gibson, et. al., _A Comparative Study of the Academic Achievement of Elementary Age Students of the United States and the British Isles_ U.S.O.E. Project No. 2177 (Research Foundation, The University of Toledo, June 1965.)

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English, and spelling was assessed. The research revealed that British pupils were at a higher level of achievement in nearly all of these subject matter areas and across all ability levels through the first four grade levels. However, by grades five and six United States and United Kingdom pupils were achieving at approximately the same levels in nearly all of the tested subject matter areas. British pupils were found to be strongest in arithmetic fundamentals, and United States pupils were strongest in English usage. There appeared to be little difference between the achievement of public and private school pupils.

Summary

A review of the literature on research in comparative teacher education involving the British Isles and the United States has indicated that little has been done in this field excepting some descriptive research completed some years ago. Indirect comparisons between the two countries were available in various writings of individuals who have examined their own country's education system or have written descriptive accounts of teacher education in countries which they have visited. No reports of empirical research in comparative teacher education were found. The only empirical research of a comparative nature has all been confined to comparisons of subject matter achievement of children from ages 6-14. American research in teacher education has been totally internal, that is, within the national boundaries, and such research has not been concerned with comparative evaluations of teachers or teacher education program products among various countries. Thus, a new research field and direction is being pioneered and made available through the present study.

Chapter III

PROJECT ACTIVITIES, SAMPLE AND SAMPLING PROCEDURES, AND VARIABLES

Overview of Research Project Activities

The idea for the cross-cultural study on Characteristics of Teacher Education Students in the United States and the United Kingdom was first discussed during the summer of 1963. The first planning meeting was held early in September of that year involving several members of the present research team. Overseas contacts had been made earlier with education personnel in the British Isles by staff members of the University of Toledo, particularly Dr. Robert L. Gibson who, at the time, was director of a cross-cultural study of elementary school achievement. Thus, lines of communication were already available between people interested in the teacher characteristics project and influential education personnel in the National Foundation for Educational Research in England and Wales, the Scottish Council for Educational Research, and the Ministry of Education for Northern Ireland.

A trip to Great Britain was made by Dr. George E. Dickson, Dean of the College of Education, and Dr. William S. Wiersma, during October 1963 for the purpose of exploring further the basic idea of participating in the cross-cultural research as well as discussing the feasibility of working with the training colleges of the United Kingdom. During a week spent in the British Isles, visits were made to the National Foundation for Educational Research in England and Wales at London, the Scottish Council for

Educational Research, Moray House College of Education in Edinburgh, Jordanhill College of Education in Glasgow, and finally, the Ministry of Education and Stranmillis College in Belfast, Northern Ireland. The feasibility of the proposed research was explored with people at the ministry and research council level as well as with people at the college level, namely, those who would be involved in the actual data collection and execution of the research. All persons visited were favorably disposed toward the project.

A number of visits were made to various offices in the United States for research discussions. On November 11, 1963 a trip was made to the Educational Testing Service (ETS), Princeton, New Jersey, by Dean Dickson and Drs. Wiersma and Prediger to discuss the use of certain ETS tests in the proposed research. At this meeting various points were explored including the possibility of revising existing tests, the use of non-ETS tests, estimates of costs for tests and scoring, and the possible time schedule for the proposed testing. Late in November a trip was made to Washington, D. C. to the Cooperative Research Branch of the United States Office of Education to discuss the feasibility of the proposed project. The verbal backing (later written approval) of the American Association of Colleges for Teacher Education was also acquired at this time. The completed proposal was submitted to the U.S.O.E. for funding, December 1, 1963. The research team associated with this project had now been expanded to six University of Toledo staff members and three graduate assistants.

During the period immediately following the submission of the proposal, the members of the research team engaged in various activities in anticipation of the funding of the proposal. For instance, a deck of IBM cards for United States colleges was secured from the U.S.O.E., Higher Education Survey Section. These cards contained the only recent nationwide information which could be located that made possible estimates of teacher education enrollments in each college or university in the United States. Late in January, 1964, Drs. Wiersma and Prediger visited the Survey Research Center of the Institute for Social Research at the University of Michigan in order to discuss, informally, large scale sampling procedures appropriate to the study. Preliminary arrangements were made for the meeting of British representatives in the United States, after March 1, 1964, for the purpose of test revision.

The approval of the project came early in March 1964 and final arrangements were immediately made for the meeting of British representatives for test revision purposes. Five representatives from the British Isles came to the University of Toledo and spent approximately ten days setting up an acceptable edition of the test battery for use in the United Kingdom. England and Wales and Scotland each had two representatives and Northern Ireland one. These persons were as follows:

Dr. Kenneth M. Miller
Senior Research Officer
National Foundation for Educational
Research in England and Wales
London, England

Miss Elizabeth Hitchfield
Froebel Educational Institute
London, England

Mr. James W. Coulthard
Moray House College of Education
Edinburgh, Scotland

Mr. James Maxwell
Moray House College of Education
Edinburgh, Scotland

Mr. Daniel F. McNeill
Stranmillis College
Belfast, Northern Ireland

Immediately following the test revision meetings, Drs. Wiersma and Prediger went to ETS to relay information on test revisions, to decide upon a workable sequence for administering the tests in the battery, to arrange for the writing of the supervisor's manual, and to outline scoring and reporting procedures. At this meeting final details were spelled out as to the responsibilities of ETS and the University of Toledo.

The United States sample was then selected and the United States colleges contacted concerning participation in the research endeavor. The sample was selected at the University of Toledo and all related correspondence was sent out from the University of Toledo. Copies of standardized forms and instructions appear in Appendix A. Dr. Kenneth M. Miller of the N.F.E.R. in London selected the institutional samples for England and Wales after consultation with project staff members at the University of Toledo. Sampling procedures for Scotland and Northern Ireland were handled directly by project staff members. College representatives were designated at each college or university both in the United States and in the United Kingdom to select the samples of students from student rosters and to administer the tests.

Test administration in the United States was scheduled to occur during late April and May, 1964. The corresponding testing period for the United Kingdom was during June and early July, 1964. This difference was due to the fact that the end of the school year in both countries does not coincide.

Four members of the research team left Toledo for the United Kingdom in mid-May of 1964. The primary purposes of this trip were to distribute the test materials and to hold training sessions for the college representatives, that is, the people who would be doing the testing in the British institutions. Three training sessions were held, near the end of May, one in Edinburgh, one in Birmingham, and one in London. Institutional representatives were asked to attend one of these sessions where the test supervisor's manuals were discussed in detail. Representatives were given the opportunity to ask any questions they might have concerning either the testing or the sampling procedures. Written instructions concerning the sample selection were provided. The American institutional representatives were also provided with a test supervisor's manual and written instructions concerning sample selection. Meetings of American college representatives were not held due to the general familarity of college personnel in the United States with testing procedures.

During late May and early June the remaining members of the research team traveled to the United Kingdom for the purpose of making visits to a sampling of British institutions participating in the study. The institutions visited are found in Appendix B. Such staff visits to selected United States institutions occurred during the winter of 1964-65. The institutions visited will be found in Appendix C. Due to difficulties in securing the cooperation of some institutions in the United States sample, limited fall testing was planned for the American colleges early in the fall of 1964. Very little of this proposed fall testing did in fact materialize.

Completed answer sheets were received by ETS during the summer and fall of 1964. The scoring of the tests and the assembling of the data were performed by ETS and the data on IBM cards arrived at the University of Toledo during March of 1965. However, primarily due to errors in the scoring of one of the tests, it took approximately one month to complete accuracy checks, eliminate incomplete data cards, and to get data cards ready for the final analysis. The analysis was then completed by mid-July, 1965.

Rough drafts of sections of the final report were being written during the spring and summer of 1965. During June, 1965, Drs. Dickson and Wiersma made a trip to London and Edinburgh to confer with British consultants on data analysis. The services of Dr. William Taylor of Oxford University and Dr. Edward J. Nussel of the University of Toledo were secured as consultants in the area of educational sociology. Mr. Coulthard, Mr. McNeill, and Dr. Miller also served the project as consultants during this period. Rough drafts of the report were completed during September, 1965 and from these the final report was produced.

Sample and Sampling Procedures

The approach to selecting the sample was to draw a random sample of students in each of the two countries. However, the entire mass of teacher trainees in the two countries could not be considered a single population.

The objectives of the study required that six student classifications be employed. Thus, students preparing for work in secondary and elementary schools were sub-divided according to whether they were in the first, second or third (final) stage of their training. As noted in the section on objectives, the basic comparisons in this study are made within these six classifications. Within any one of the six classifications, it was not feasible to select the sample ignoring the colleges.* Since testing had to take place through the auspices of the colleges, they were used as primary units and the individual students as subunits in the sampling procedure.

Selection of the colleges was conducted at a central office as previously explained. However, the selection of the students within a college was the responsibility of the local college representative assigned to this project. The representative was given the numbers of students to be tested in each of the six student training classifications and was given instructions to select a random sample from the students falling in these descriptions. Since the instructions included a suggested procedure for this selection, the assumption was made that the college representative would follow a satisfactory procedure for random selection.

The differences between the two countries made it undesirable to classify the colleges on a common basis. A limited number of classifications was used, essentially as strata within the two countries, but these college classifications were not the same for the two countries. For this reason the samples for the

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*In this discussion college is used to mean an institution of higher learning which trains teachers. This could, in fact, be a university.

United States and the United Kingdom are discussed separately. In each case the procedure used was designed to yield a representative sample on the basis of a random selection.

United States Sampling Procedures. The practical limitations of the study restricted the number of college samples to one. That is, the students of the six student training classifications were drawn from a single sample of 50 colleges in the United States. Ideally, a separate sample would have been drawn for each of the six classifications since (1) many colleges do not identify sophomores (stage one), especially in secondary programs and (2) it cannot be assumed that colleges train proportional numbers of elementary and secondary teachers. But owing to the need for simplification of an already complex research design and practical limitations, only a single sample of colleges was drawn from the United States college population.

The sampling of United States colleges was based on the number of graduating elementary teachers in an institution. A deck of IBM cards for colleges preparing elementary teachers was secured from the United States Office of Education, Higher Education Survey Section, which contained information on the number of elementary teachers graduating from American colleges during the 1961-62 school year. Separate data were available for each of 767 colleges of which 50 were selected. Colleges not having regional accreditation were not included in this IBM deck. The colleges were arranged on a list prior to selection on the basis of three stratifying variables. These variables were:

1. NCATE[*] - Non-NCATE accreditation
2. Region -- the regions of the United States were defined by the boundaries of the six regional accreditating associations.
3. Public - private.

Thus, within the NCATE - Non-NCATE categories, colleges were listed by region. Within a region, public and private colleges were grouped separately. Within these groups, arrangement was alphabetical. This classification gives 2 x 2 x 6 = 24 separate groups, e.g., NCATE, North Central region, public. The stratification of the college population was on the basis of this classification.

The colleges of the sample were selected with probability proportional to size; size being defined as the number of elementary teacher graduates in 1961-62. The procedure involved determining a sampling interval by dividing the population total, i.e., total number of elementary graduates, by the number of colleges in the sample. A number is randomly selected from this interval to determine the first "hit"; a hit being a college selection. Each college on the list has associated with it the accumulative total of graduates for that college and all preceding colleges of the list. The first "hit" occurs by determining in which accumulative total the randomly selected number falls. Subsequent "hits" are determined by adding the sampling interval to each immediately preceding "hit."

The criterion for a simple random sample is that every member of the population has an equal probability of inclusion in the sample. The procedure of sampling through a primary unit to get at a subunit involves two probabilities. In this study the probabilities were (1) the probability of the college selection and (2) the probability of the student being selected within the college. The probability of a student being included in the sample was the product of these two probabilities. It can be mathematically shown that if the selection of the college is based on probability proportional to size, the size of the within-college sample is the same for all colleges.

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[*] National Council for Accreditation of Teacher Education

The selection of the sample of 50 colleges was made by the above procedure and the initial sample list appears in Appendix D. However, it was considered extremely unlikely that all colleges selected would be willing to cooperate. Thus, a replacement procedure was decided upon before any colleges were selected. The replacement procedure for colleges that were unable to take part in the study was to substitute the next college on the original list that was characterized by the same stratification variables.

A test battery of the magnitude used in this project entailed scheduling and administration difficulties, all of which could not be anticipated in advance when a college committed itself to participate in the study. Thus, some colleges which had indicated a willingness to do the testing ultimately did not and their withdrawal came too late for replacement. Every effort including, in a few cases, extension[*] of the testing deadline into the fall of 1964 was made to get the maximum number of colleges in the sample to participate. The end result was a total of 35 participating colleges. This is 70% of the initial colleges proposed for the study. A list of the

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[*] A description of test administration difficulties and the conditions of the extension appear earlier in this report.

35 participating colleges appears in Appendix E.

The initial instructions to the college representatives called for testing a total of 5,887 students. Of this total the percentages allotted to stages three, two, and one were 45.8, 32.1, and 22.1 respectively. A greater percentage was allotted in the third stage because primary emphasis of this study was on the finished teacher education product, that is, stage three. The overallocation of the entire sample was in anticipation of fewer students being tested than allotted. An inspection of Table 1 reveals that this estimate of undertesting was conservative. The 5,887 allotment was split 49.2% secondary and 50.8% elementary. The general allotment for both elementary and secondary education students in a specific college was 28, 19, and 19 for stage 3 (seniors), stage 2 (juniors), and stage 1 (sophomores), students respectively. There were a few exceptions to this general allotment, however. If a college had fewer students than the allotment in any one classification, the number available was allotted. Also colleges which did not identify sophomores in Education simply had this allotment dropped. These variations caused the slight difference in total numbers between secondary and elementary students.

The various testing and administrative difficulties that reduced the number of participating colleges also reduced the number of students testing in those colleges that did participate. That is, all colleges did not test the allotted number of students. The numbers of students actually tested appear in Table 1 which constituted the U. S. sample achieved, data from which provides the basis for the analyses made.

Table 1

Number and Percentage of United States Students in the Sample by Student Classification

	Area of Preparation					
	Elementary		Secondary		Total	
Stage	No.	%	No.	%	No.	%
one	273	11.0	278	11.2	551	22.2
two	467	18.8	393	15.9	860	34.7
three	629	25.3	442	17.8	1071	43.1
Total	1369	55.1	1113	44.9	2482	100.0

United Kingdom Sampling Procedures. There are important differences in the organization of teacher training colleges in England and Wales, Scotland, and Northern Ireland, and these three areas provided the regional criteria on a national sampling stratification variable for the United Kingdom. The only other major teacher-preparing institutions in the United Kingdom are the university departments of education in England and Wales, which formed a fourth group in the British sample. The two Northern Ireland and six Scottish training colleges were included without sampling. From a list of 122 general training colleges in England and Wales, a sample of 30 was selected according to the same procedure as that adopted for the United States sample, the pre-stratification being based on geographical region, whether colleges enrolled students of one sex or were coeducational, and college size. The estimate of size used was total enrollment at the college during the 1962-63 school year. Students with majors in non-academic subjects, such as physical education, etc., were not included in these figures whenever they could be separately identified.

A check was made, following the initial selection, on the representativeness of the sample by sex of students enrolled and size of institution. It was found that mixed (co-educational) colleges were slightly over-represented as were larger colleges. Appropriate substitutions were randomly made within the regions.

From the total of 23 university departments of education 14 were selected according to geographical region and number of students enrolled (all university departments of education have both men and women students). The selection was made using a combination of probability proportional to size and geographical location as the stratifying variable "sex of students enrolled" dropped out of this selection. Geographical location was inserted into the procedure only if two adjacent universities were selected. In that case, one was dropped and another university of approximately equal size selected from an omitted region. The final sample of participants consisted of 28 training colleges and 8 university departments. Six of the university departments originally agreeing to participate did not carry through with the testing. The list of participating colleges and university departments appears in Appendix F.

A replacement procedure similar to that utilized with respect to the U. S. sample was employed for both training colleges and university departments of education.

The English colleges, in addition to students preparing to teach at the elementary and secondary level, have a middle group which is essentially preparing to teach at both levels. This group is referred to as junior-secondary. It was decided that these students would be classified either elementary or secondary depending upon their preference. It was anticipated that a large majority of these students would go into secondary teaching since it would be relatively easy for them to acquire teaching positions according to their preference, which favored the secondary level. Thus, junior-secondary was basically, for sampling purposes, considered to be part of the secondary group.

The colleges were assigned a total of 73 students each across the six student classifications. There were 35 in elementary and 38 in secondary which was evenly split between junior-secondary and secondary. The assignments for first, second, and final year were 11, 11, and 13, respectively, for elementary and 12, 12, and 14, respectively, for secondary. These secondary assignments were also evenly split between junior-secondary and secondary.

The above procedure would allocate a total sample of 2,190 to the English training colleges. However, not all colleges had students enrolled in all of the six classifications. If a college did not have students in a classification, that allotment was simply dropped and not replaced by students from another college. This reduced the size of the allocated English sample for training colleges to 1,946.

The students enrolled in the university departments of education were classified as secondary in the final year of training. An English research committee had a special interest in this group and desired to get a sample of substantial size. Therefore, this group was given an overallocation relative to its population proportion. The professional course in the university department of education is of one year's duration and 27 students were assigned in each institution. This would give a total of 378 for the initial 14 departments but this was reduced to 216 when the number of cooperating departments was reduced to eight. If we consider the final allocations, the total sample size for England and Wales was 2,162 which was split 48.1% elementary and 51.9% secondary.

Sample allocations in Northern Ireland and Scotland were larger than proportionate sampling of United Kingdom students would require in order to facilitate the use of the data in related research projects. Northern Ireland was allocated a sample size of 150 which was split 49.3% elementary and 50.7% secondary. The Scottish sample allocation was 450 which was split 72.7% elementary and 27.3% secondary. Scotland does not identify the first and second level students in secondary and hence there were only four student classifications in Scotland. A student becomes a secondary teacher in Scotland by attending a university, and upon the completion of the university training, attending a teacher training college for a final year of instruction. The student is not identified as an education student during his university training. Students in the Scottish system qualify as teachers under the provisions of various chapters of the Scottish Regulations. A Chapter III graduate could conceivably teach in an elementary school, although this is a rare occurrence. Thus, for purposes of analysis, all Chapter III graduates were combined with those qualifying under Chapter V as being secondary education students. Sampling allocations for both Northern Ireland and Scotland were proportional to the enrollment in each student classification in each institution concerned. However, an overallocation, in the final year, of 20% was allowed for overtesting.

The total allocated United Kingdom sample consisted of 2,762 students. The percentages of these students in Northern Ireland, Scotland, and England and Wales were 5.4%, 16.3% and 78.3%, respectively.

An inspection of the data obtained from the English sample revealed that the preferences indicated by the junior-secondary students were 63.7% secondary and 36.3% elementary. (The reader is reminded that the preference of the student classified him as elementary or secondary.) The secondary percentage was not as high as initially anticipated and hence the sample total for elementary exceeded that for secondary.

Although the participating British institutions encountered certain difficulties in obtaining the sample of their students required by the research design, undertesting was less than in the case of the United States institutions, partly due to the higher drop-out rate of colleges in the United States sample. Also, the British colleges came closer to testing their assigned numbers. The number of students in the total United Kingdom sample is given in Table 2. It can be seen that the United Kingdom sample amounted to 2,175 students out of an original allocation of 2,762.

Table 2

Number of Percentage of United Kingdom Students in the Sample by Student Classification

	Area of Preparation					
	Elementary		Secondary		Total	
Stage	No.	%	No.	%	No.	%
one	453	20.8	211	9.7	664	30.6
two	446	20.5	201	9.2	647	29.7
three	419	19.3	445	20.5	864	39.7
Total	1318	60.6	857	39.4	2175	100.0

The total number of students tested in both countries was 4,657. A summary of the entire sample in terms of student classification appears in Table 3. The data analysis was based on the information obtained from this sample.

Table 3

Sample Frequencies by Country and Student Classification

	Elementary				Secondary			
Country	1st	2nd	Final	Total	1st	2nd	Final	Total
U. S.	273	467	624	1369	278	383	442	1113
U. K.	453	446	419	1318	211	201	445	857
Total	726	913	1037	2687	489	594	887	1970

Representativeness of Obtained Sample

United States. The initial selection of colleges was a random selection and the college representative was instructed to make a random selection of the students within his institution. However, various difficulties in obtaining the desired sample were encountered, especially in the United States. Some of these have already been discussed. A marked limitation of the United States sample was that out of 5,000-plus students assigned to be tested approximately 2,500 were actually tested. Test data was received from 35 of the 50 United States institutions that agreed to take part in the study. This loss of 15 colleges had the result of depriving the study of approximately 1,800 of the students assigned to be tested. The remaining students were lost because not all those colleges that did return data were able to complete the testing of the full number of students allocated to them. Some undertesting was anticipated and, hence, overallocations were made. But the amount of overallocation needed was obviously underestimated. The assumption must be made that the college representatives did follow a random selection procedure as instructed, but had all 50 colleges in the sample actually tested students, undertesting would still have represented a sampling problem. The number of college withdrawals may have imposed some limitations on the college sample. For example, large institutions, such as the large state universities, were underrepresented in the sample. The initial sample contained an adequate proportion of these institutions, but it was extremely difficult to secure their willingness to participate in the study after agreement to do so.

The research team found this attitude difficult to understand coming as it did from universities heavily committed to educational research and its promotion. Obviously, there was no way that a college could be forced into participating; not that forced participation would have been at all desirable.

The proportional representativeness of the United States sample actually obtained was studied in terms of the stratifying variables used in selecting the colleges. The NCATE, non-NCATE, public, private strata were put together in a four category breakdown and the regions of the United States made another six category breakdown.

The population proportion, as has been previously mentioned, was determined from 1961-62 data on graduating (final year) elementary students only, which was used in selecting the initial sample of colleges.

This was only one of the six student classifications. However, it was reasoned that the proportions would be quite similar for the other two elementary classifications. Also, the breakdown classifications made up large segments of the country. Although, an individual college may in fact have quite different proportions between elementary and secondary, it was reasoned that for large geographical areas and the broad classifications of NCATE - non-NCATE, public-private, the proportions of secondary would be similar to that of elementary students.

An inspection of the achieved response in each of the sampling strata covered in Table 4 indicates that the proportions of NCATE-Public are slightly low in five of six student classifications. The same is true for Non-NCATE-Private. NCATE-Private was slightly overrepresented in all classifications. Non-NCATE-Public was high in four of six classifications.

The matter of determining adequacy of representation from this date is somewhat arbitrary in light of the nature of the population data. The greatest discrepency, as indicated in Table 4, was in the neighborhood of 10 per cent and this occurred infrequently.

The sample proportions of Table 5 follow the general pattern of the population proportions. As in Table 4, the greatest discrepencies are around 10 per cent but there are relatively few of this magnitude. In the first year classification for both elementary and secondary, region 3 was not represented. Region 3 received a relatively small allocation and the colleges selected simply did not identify or did not test the students in this year of training.

Table 4

Sample Numbers and Proportions, and Population Proportions for the United States by NCATE - Non-NCATE - Public - Private

	Elementary						Secondary						Population* Proportion
	1st Yr.		2nd Yr.		Final Year		1st Yr.		2nd Yr.		Final Year		
	No.	Prop.	No.	Prop.	No.	Prop.	No.	Prop.	No.	Prop.	No.	Prop.	
NCATE Private	35	.128	86	.184	126	.200	34	.122	57	.145	95	.215	.119
NCATE Public	177	.648	266	.570	346	.550	169	.608	233	.593	262	.593	.632
Non-NCATE Private	44	.161	50	.107	446	.073	60	.216	51	.130	37	.084	.175
Non-NCATE Public	17	.062	65	.139	111	.176	15	.054	52	.132	48	.109	.074

* Based on Elementary Final Year Students only.

Table 5

Sample Numbers and Proportions, and Population Proportions for the United States by Region

Region	Elementary						Secondary						Population* Proportion
	1st Yr.		2nd Yr.		Final Year		1st Yr.		2nd Yr.		Final Year		
	No.	Prop.	No.	Prop.	No.	Prop.	No.	Prop.	No.	Prop.	No.	Prop.	
1	50	.183	77	.165	93	.148	58	.209	67	.170	80	.181	.186
2	40	.147	53	.113	39	.067	36	.129	51	.130	24	.054	.055
3	0	.000	27	.058	117	.186	0	.000	7	.018	20	.045	.085
4	5	.018	31	.066	37	.059	3	.011	22	.056	24	.054	.056
5	138	.505	189	.405	215	.342	114	.410	159	.404	190	.430	.399
6	40	.147	90	.193	128	.203	67	.241	87	.221	104	.235	.218

* Based on Elementary final year students only.

United Kingdom. The sample for the United Kingdom is considered in two parts. First, the three geographical regions of Northern Ireland, Scotland, and England and Wales are taken into account. Second, England and Wales are regarded separately since there was college selection in this portion of the country. Nineteen regions of England and Wales are indicated in terms of their college representation. Training colleges in these regions are considered in terms of student representation on the "sex of the student enrolled" variable.

The actual number of elementary, junior-secondary and secondary teacher education students enrolled in the final year became available for the 1962-63 school year, although this information was not known for England and Wales when the sample was drawn for this area. Enrollment information was also available for the first two years for Northern Ireland and Scotland. The population proportions used for comparing the sample to the population are based on final year enrollments for the three regions of the country. The junior-secondary population enrollment of England and Wales was allocated to the elementary and secondary areas according to the split in the sample. No other information was available on which to base this allocation.

The sample and population information for the three basic areas of the United Kingdom appears in Table 6. Inspection of this table reveals that Northern Ireland and Scotland have consistently high sample proportions in those classifications for which they have students. England and Wales, then of necessity, are low in these classifications. It should be recalled, however, that the discrepancies between these populations and sample proportions reflect deliberate oversampling in Northern Ireland

and Scotland. They were accounted for in the final analysis of United Kingdom data. Northern Ireland and England and Wales are overrepresented in the first and second year elementary, since Scotland has no representation in these classifications.

The 334 secondary students in their final year in the sample from England and Wales were divided according to the type of institution in which they were enrolled--148 in Departments of Education and 186 in training colleges. This split comes very close to the corresponding proportions of the population although the original intent was to overtest in the Departments of Education. Student dropout and non-testing was much less in English training colleges than in university departments. Consequently, the overtesting in the university departments did not materialize. The two types of students were separated for analysis purposes.

The numbers of training colleges and university departments in the population and sample for England and Wales appear in Table 7. The training colleges are categorized according to region and sex of student enrolled, with university departments according to region only since they are coeducational. The sample data of Table 7 are based on the numbers of colleges that actually participated in the study. The eight participating departments of education were considered a good representation in terms of possible relevant factors such as region, urban location, and size.

A final consideration of the English sample concerns only the training colleges in terms of the sex of the students enrolled. For this comparison numbers of students rather than numbers of institutions were used and the population proportions were based on final year enrollment. The data for this comparison appear in Table 8. An inspection of this table indicates that there were some discrepancies between population and sample proportions. Students enrolled in women's colleges tended to be overrepresented in both the elementary and secondary samples. The students of mixed colleges tended to be underrepresented in the sample.

Table 6

Sample Numbers and Proportions, and Population Proportions for the United Kingdom by Geographical Region

Region	Elementary							Secondary						
	1st Yr.		2nd Yr.		Final Year		Population Proportion*	1st Yr.		2nd Yr.		Final Year		Population Proportion*
	No.	Prop.	No.	Prop.	No.	Prop.		No.	Prop.	No.	Prop.	No.	Prop.	
Northern Ireland	21	.046	20	.045	24	.057	.026	16	.076	16	.080	20	.045	.011
Scotland	79	.174	82	.184	99	.236	.113	0	.000	0	.000	91	.204	.135
England and Wales	353	.779	344	.771	296	.706	.861	195	.924	185	.920	334	.751	.864

*Based on final year enrollments.

Table 7

Number of English Colleges in the Population and Sample by Region and Sex of Student Enrolled

Region	Training Colleges								University Departments	
	Mens		Womens		Mixed		Total			
	P[a]	S[b]	P	S	P	S	P	S	P	S
A	1	0	3	0	7	2	11	2	1	0
B	1	0	4	2	2	1	7	2	1	0
C	0	0	7	1	2	1	9	2	1	0
D	1	0	2	0	2	0	5	1	1	1
E	1	0	1	1	0	0	2	1	1	1
F	0	0	1	0	1	0	2	0	1	0
G	0	0	1	0	2	0	3	0	1	0
H	0	0	3	1	5	0	8	1	1	0
J	0	0	0	0	1	1	1	1	1	1
K	0	0	2	1	3	1	5	2	1	0
L	3	1	15	4	7	1	25	7	2	0
M	1	1	3	1	4	0	8	2	1	0
N	0	0	2	1	3	0	5	1	1	1
O	1	0	0	0	6	2	7	2	1	0
P	2	0	1	0	1	1	4	1	1	0
Q	0	0	1	0	1	0	2	0	1	0
R	0	0	3	0	2	0	5	0	1	1
S	0	0	1	0	4	2	5	2	1	1
T	0	0	2	0	6	2	8	2	4	2
Total	11	2	52	12	59	14	122	28	23	8

[a] P-represents colleges in population

[b] S-represents colleges in sample

Note: See Appendix G for a list of Area Training Organizations and their respective regional code.

Table 8

Sample Numbers and Proportions, and Population Proportions for the English Training Colleges by Sex of Student Enrolled

Sex of Student Enrolled	Elementary							Secondary						
	1st Yr. No.	1st Yr. Prop.	2nd Yr. No.	2nd Yr. Prop.	Final Year No.	Final Year Prop.	Population Proportion*	1st Yr. No.	1st Yr. Prop.	2nd Yr. No.	2nd Yr. Prop.	Final Year No.	Final Year Prop.	Population Proportion*
Mens	24	.068	22	.064	15	.051	.050	21	.108	22	.119	15	.081	.155
Womens	171	.484	169	.491	170	.574	.420	73	.374	76	.411	70	.376	.239
Mixed	158	.448	153	.445	111	.375	.530	101	.518	87	.470	101	.543	.605

* Based on final year enrollments.

Variables

The instruments used in this study were chosen because they assess important cognitive and affective characteristics of teachers and teacher education students. At the same time they provide for the objective scoring necessitated by a large-scale study. A number of instruments were considered for use in the study. Those selected for closer inspection appeared to be most appropriate in terms of content validity and least subject to cultural bias. Every item in these tests was inspected by a panel of five consultants.* Four filled positions on the education faculties of colleges in England and Wales, Scotland, and Northern Ireland. One was associated with the National Foundation for Educational Research in England and Wales.

Test items were "translated" to their British equivalents when judged to be necessary by the consensus of the British inspection and project staff members. In many cases this translation simply amounted to minor revisions such as the substitution of "headmaster" for "principal." When the sense of intent of an item could not be closely paralleled in the United Kingdom revision, the item was not scored for either U.S. or U.K. students. The latter were instructed in the test booklet to make some arbitrary response to the item and go on to the next question. Since none of the tests on which this occurred were highly speeded, American students who answered the item were not unduly handicapped.

When, in the judgment of the test inspection panel, the content validity and reliability of an instrument would be seriously impaired by revision or discarding of items, the instrument was not included in the study. Thus, tests in the areas of educational foundations, social sciences, and history were eliminated from consideration.

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*These persons have been identified in the introductory section of this chapter.

Although an effort was made to locate British tests appropriate to the purposes of the study, none that could be objectively scored were found. Hence, except for the Culture Fair Intelligence Test, the cognitive tests included in the study undoubtedly possess a higher degree of content validity for the American educational system than for the British system. Of course, this does not prevent students in the British Isles from obtaining high scores on these tests. Rather, it means that their knowledge, understandings, etc., are being sampled according to American definitions of what should be measured in a given content area. British versions were constructed for all tests in the battery except for the Culture Fair Intelligence Test. Scoring of the American and British versions was identical.

The entire battery took approximately twelve hours to administer and was taken in at least three sittings. All responses were recorded on special answer sheets. After machine scoring, the scores for each student were collated by means of the student's identification number which had been recorded on each answer sheet. The tests were administered by a supervisor at the cooperating college or university according to instructions included in booklets covering the entire battery. These booklets, which were prepared by the Educational Testing Service (ETS), were patterned after the booklets used in many of ETS's national testing programs. Orientation sessions for the supervisors were held at three centers in the British Isles shortly before testing began.

A brief description of the content of each of the tests in the battery is given below. Since all tests except the Teacher Characteristics Schedule are commercially available, only this instrument will be described at some length. Whenever possible, the descriptions will be paraphrased or quoted directly from test manuals or other material distributed by the publisher in order to present as precise and concise a picture of purpose and content as possible.

Measures of Academic Achievement

The Comprehensive College Tests. Tests in the General Examination section of this recently published battery (ETS, 1965) were made available for use in the study before they were placed on the general market. These examinations

> provide a comprehensive measure of undergraduate achievement in the five basic areas of liberal arts education: English Composition, Humanities, Mathematics, Natural Sciences, and Social Science-History. The tests are not designed to measure advanced training in a discipline, but to assess the student's knowledge of fundamental facts and concepts, his ability to perceive relationships, and his understanding of basic principles. The General Examinations are most frequently used for assessing the general educational background and growth of students who have had one or two years of college instruction or its equivalent.[61]

Only English Composition, Natural Sciences, and Humanities tests were used in the study. In addition to total scores, the Natural Sciences Test yields subscores for the biological and physical sciences, and the Humanities Test yields subscores for Fine Arts and Literature. All results for these tests are reported in terms of raw scores using a rights-only scoring formula. Time limits range from 60 minutes for the English Composition test to 75 minutes for each of the other two tests.

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[61] Educational Testing Service. The Comprehensive College Tests: Manual For Interpreting Scores (Princeton, N. J.: E.T.S., 1965) p.5

Cooperative General Culture Test. Mathematics, Form A. This test, published by ETS (1956), was chosen instead of the Mathematics Test in the General Examinations section of the Comprehensive College Tests primarily because item content and difficulty seemed more appropriate to the students included in the study sample. Items are concentrated in the areas of arithmetic and algebra although a few plane geometry, solid geometry, and trigonometry items are also included. Most of the items are computational in nature or require the recall of facts. However, some reasoning problems are also included. The test, which has a 30 minute time limit, was designed to reflect the content of courses generally offered in the first two years of a liberal arts program. Results are reported in terms of raw scores using a rights-only scoring formula.

Measures of Professional Knowledge

Teacher Education Examination Program (TEEP). This testing program (ETS, 1962), which has been available for use by colleges and universities since 1957, consists of two types of tests, General Professional Examinations and Teaching Field Tests. Both types of tests are intended for use with students nearing completion of their teacher education programs. Scores for seven separate tests "...designed to measure the student's knowledge and understanding of basic principles of professional education, English usage, and general culture"[62] are reported for the General Professional Examinations. Within the area of professional preparation, scores for the following four tests can be obtained: Foundations of Education, Child Development and Educational Psychology, Guidance and Measurement, and Instructional Methods. It was because of the availability of scores representing different aspects of professional preparation that TEEP tests were included in the study. Review by the panel of consultants led to the decision to use only the last three tests listed above. Each requires 25 minutes of testing time.

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[62] Educational Testing Service. Teacher Education Examination Program: Handbook for Presidents, Deans and Department Heads. (Princeton, N. J.: ETS, 1962) p.4

Eight tests designed to "...provide the student with an opportunity to demonstrate certain competencies essential for teaching in a specific field"[63] are available in the teaching field portion of TEEP. One of these, Elementary School Education, was chosen. Hence, a total of four TEEP tests were used in the study. However, only students planning to teach in an elementary school took the Elementary School Education test (80 minutes). Results for all four tests are reported in terms of raw scores using a rights-only scoring formula.

Measures of Teacher Characteristics

Teacher Characteristics Schedule. The Teacher Characteristics Schedule is one of the products of the Teacher Characteristics Study directed by David G. Ryans (1960). Since the Schedule is not currently available from a commercial publisher and since it is neither as well known nor as widely used as the other instruments described in this section, additional attention will be given to it.

Much of the Teacher Characteristics Study was devoted to the identification of major dimensions of teacher behavior, attitudes, and other personal characteristics. Once these dimensions were identified, scales were constructed to assess the relevant behavior and characteristics. Two types of items were used in many of these scales, direct inquiry items and so-called "correlate items." The latter were items not *obviously* related to what was being assessed but, in fact, *statistically* related to scores obtained from the "obvious" items. In general, the correlate items were those thought to be less sensitive to intentional or unintentional falsification of response.

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[63] Ibid., p.4.

The nine scales of the Teacher Characteristics Schedule are described below in terms of the behaviors they were designed to assess. Behaviors associated with high scores are described first for each scale. The descriptions are taken from the report by Ryans.[64]

Scale	Description
X_{co}	warm, understanding, friendly vs. aloof, egocentric, restricted classroom behavior.
Y_{co}	responsible, businesslike, systematic vs. evading, unplanned, slipshod classroom behavior.
Z_{co}	stimulating, imaginative vs. dull, routine classroom behavior.
R_{co}	favorable vs. unfavorable opinions of pupils.
R_{1co}	favorable vs. unfavorable opinions of democratic classroom procedures.
Q_{co}	favorable vs. unfavorable opinions of administrative and other school personnel.
B_{co}	learning-centered ("traditional") vs. child-centered ("permissive") educational viewpoints.
I_{co}	superior verbal understanding (comprehension) vs. poor verbal understanding.
S_{co}	emotional stability (adjustment) vs. instability.

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[64] D. G. Ryans, *Characteristics of Teachers*, (Washington, D. C.: American Council on Education, 1962) p. 388.

Several different forms of the Teacher Characteristics Schedule are available. The most frequently used forms are those appropriate to all elementary teachers, all secondary teachers, and all teachers either elementary or secondary. Although scores obtained from the latter forms were usually found to be less reliable and valid than those for the other forms, the all-teacher form (Revised Form 99-60) was used in this study because of research design requirements. This form represents a revision of the original Form 99 and includes some direct inquiry items along with the correlate items. Reliabilities, estimated from modified split-half procedures, generally ranged in the .70's for the original Form 99.[65] Data on content, concurrent, predictive, and construct validity are too extensive to summarize. However, empirical estimates of validity were, in general, discouragingly low.[66]

Intercorrelations of the various scales have been reported for large groups of elementary and secondary school teachers in the United States and should be kept in mind when interpreting the results of this study. According to Ryans, intercorrelations were

> positive and often substantial. There appeared to be a notable tendency for characteristics X_{co} (warm, understanding), Z_{co} (stimulating), and $-B_{co}$ (permissive) to be highly correlated among elementary teachers, suggesting a factor contributed to by friendly and stimulating teacher behavior combined with permissive, child-centered educational viewpoints. There also was a tendency for Y_{co}, R_{co}, R_{1co}, and Q_{co} to be interrelated, suggesting a factor made up of organized teacher behavior and favorable opinions on the part of teachers regarding other persons. These trends were somewhat less evident among secondary teachers, but the X_{co} and $-B_{co}$ combination (friendly, warm behavior and permissive educational viewpoints) seemed again to be

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[65] *Ibid.*, p. 235.

[66] *Ibid.*, p. 238-267.

very much in evidence in one factor, and Y_{co} (businesslike, well-organized teacher behavior) appeared also to be prominent in a second major pattern.[67]

Teacher Characteristics Schedule items were reviewed by the same panel of British Isles and United States representatives who reviewed the other instruments used in the study. Two items on the revised Form 99-60 were eliminated from scoring as a result of this review. Since many of the items were not scored on any key, and since all were at the end of the Schedule, these items were eliminated from the United Kingdom and United States revisions. Thus, the Revised Form 99-60 contained 222 items but the forms used in this study contained only 175 items. The same scoring keys were used for both the U.S. and U.K. revisions. From 32 to 45 items were scored on each of the nine scales except for scale R_{1co} on which only 16 items were scored. Many items were scored on more than one scale, and in many cases, more than one of the responses to an item was scored on a single scale. Responses could receive weights of +1, 0, or -1. Items in the U.S. and U.K. revisions are identical to those in the Revised Form 99-60, although, of course, the revisions are shorter.*

Minnesota Teacher Attitude Inventory (MTAI), _Form A_. This widely used inventory "...is designed to measure those attitudes of a teacher which predict how well he will get along with pupils in interpersonal relationships, and indirectly how well satisfied he will be with teaching as a vocation."[68] The application of an empirically developed scoring key to the 150 Likert-type items in the MTAI results in a single score. The authors define the extremes of the score scale in terms of their conceptions of the characteristics of desirable and undesirable teacher-pupil relations. The following paragraphs present the general flavor of these conceptions.

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[67] _Ibid._, p. 389

*Persons interested in the United States and United Kingdom revisions of Form 99-60 should contact any member of the project team.

> It is assumed that a teacher ranking at the high end of the scale should be able to maintain a state of harmonious relations with his pupils characterized by mutual affection and sympathetic understanding. The pupils should like the teacher and enjoy school work. The teacher should like the children and enjoy teaching.
>
> At the other extreme of the scale is the teacher who attempts to dominate the classroom....both teacher and pupils dislike school work, there is a feeling of mutual distrust and hostility. Both teacher and pupils attempt to hide their inadequacies from each other. Ridicule, sarcasm and sharp-tempered remarks are common. The teacher tends to think in terms of his status, the correctness of the position he takes on classroom matters, and the subject matter to be covered rather than in terms of what the pupil needs, feels, knows, and can do.[69]

Thus, some of the characteristics tapped by the MTAI are similar to those assessed by several of the scales on Ryans' Schedule. However, it would be impossible to state a one-to-one correspondence.

Both the MTAI and the Teacher Characteristics Schedule are subject to intentional or unintentional falsification of response. Especially on the MTAI, it is possible to identify the "nice" or the "right" answers according to what one has been taught in professional education courses. However, the nonthreatening situation under which these inventories were taken should have encouraged truthfulness of response. A comprehensive summary of research on the MTAI has been presented by Getzels and Jackson in the *Handbook of Research on Teaching* edited by Gage.[70] Very little revision of items was required for use in the British Isles.

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[68] W. W. Cook, C. H. Leeds, and R. Callis, Manual: Minnesota Teacher Attitude Inventory. (New York: Psychological Corporation, 1951.) p. 3

[69] Ibid., p. 3

Measure of General Mental Ability

Culture Fair Intelligence Test, Scale 3, Form A. While many would argue that no test can be completely unbiased across different cultures, this perceptual test of general mental capacity or Spearman's "g" was chosen for the study because it appeared to be less biased or more efficient than any other so-called culture fair intelligence test currently available. It was chosen in full recognition that it is not primarily a measure of scholastic aptitude. A measure of scholastic aptitude, or verbal intelligence as it is sometimes called, would have been a desirable addition to the tests used in this study. However, such measures, relying as they do on educational background and everyday experiences as sources of items, would be very difficult to translate in a manner that would remove most if not all cultural bias.

Scores on the Culture Fair Intelligence Test are reported in terms of standard score IQ's having a mean of 100 and a standard deviation of 16 in the normative population. The items, which are all pictorial, required no revision.

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[70] N. L. Gage (Ed.) *Handbook of Research on Teaching* (Chicago: Rand, McNally, 1963.) pp. 506-582

Summary

This chapter has been directed toward a description of project activities, the sample, sampling procedures, and variables. Education students were sampled through the intermediate unit of colleges. Sampling difficulties in the United States were primarily the result of (1) certain colleges which chose not to cooperate in the study and so indicated when it was too late to replace them, and (2) undertesting by many colleges which did participate in the study. The United Kingdom had less difficulty in securing the assigned sample and few colleges declined to cooperate, with testing within the colleges being quite complete. Although the achieved response from the United States institutions must be considered disappointing in terms of the original scope of the study, it is felt that the fact that the data obtained can be shown to be representative within all strata, except regional stratification does permit viable comparative analyses to be made in terms of these significant strata. Without a type of follow-up investigation that is unfortunately beyond the limitations of the existing contract, it is difficult to ascertain with any accuracy the factors that may have led to the undertesting that took place in the United States sample, or to uncover the particular individual or institutional biases that the achieved sample may conceal. There is inadequate experience and discussion on the subject of national sampling of collegiate populations in the United States, and the difficulties experienced in obtaining a high level of response in respect to the present study have provided certain indications regarding procedural changes that might be incorporated into any future attempt along these lines.

Analysis of the sample data is discussed in the next chapter. Attempts were made to adjust for observed discrepancies between sample and population data when it was considered important to the purpose of this study. Obviously, the available sample data obtained is the data analyzed.

Chapter IV

ANALYSIS AND RESULTS

Overview of the Analysis

The basic analysis procedure was one of statistically testing for significant differences between the dependent variable means of the two countries. Each dependent variable was separately analyzed. Secondary students were measured on 22 and elementary students on 23 dependent variables. Since there were three elementary and three secondary student classifications, the total number of separate analyses was 135. It should be noted that the number of observations remained the same for all dependent variables of a specific student classification. These numbers were reported in the sampling chapter.

Weighted means were computed for each country. The estimate of the sampling variance of the weighted mean was then computed. The initial problem was "how to weight and on what variables?"

The United States sample was weighted on the NCATE-NonNCATE, Public-Private variables. The population proportion was used as previously described and this was the same for both elementary and secondary and all student classifications. When using these two variables, no empty cells appeared and the minimum frequency was 15. Thus, it was possible to compute a variance for each cell (strata) which is necessary for computing the sampling variance of the weighted mean. This would not have been possible using region as a stratifying variable. Here there were empty cells and also cells with very small frequencies such as three and five.

A necessary strata for the United Kingdom was, of course, the geographical region; Scotland, Northern Ireland and England and Wales. An additional possible variable would have been "sex of the students" enrolled in the training colleges of England and Wales. However, in a conference with Dr. Kenneth Miller of The National Foundation for Educational Research in England and Wales (NFER), it was decided not to include this variable. Dr. Miller selected the English sample and indicated that he did not consider this a relevant variable for the analysis portion of the study. In selecting the sample it was used to enhance representativeness and also for the purposes of acquiring additional information for the NFER. The additional information collected has nothing to do with this study but was used by the NFER for their own purposes.

The English, final year secondary student group was, however, dichotomized on the basis of university graduates or those enrolled in the regular training college program. Since the backgrounds of these two groups are quite different, it was thought that this would be an important variable. Actually the sample split was very close to the population proportions. Thus, for this one analysis England and Wales were represented by two strata.

The proportions for the British Isles did not remain constant across all student classifications, nor did the number of strata. The three geographical regions were the basic strata and these appeared as such for the three elementary classifications. The proportions were the populations proportions based on final year elementary enrollment. The first two years of the secondary classification were based on only two strata; Northern Ireland and England and Wales, since Scotland does not identify these students. The final year secondary had four strata. Scotland was represented and England and Wales were divided between university graduates and regular training college students. In all cases the proportions used were population proportions based on final year secondary enrollment.

The computational formulas[71] used for determining the weighted mean for each country and the variance of this mean appear below.

The weighted mean is designated by $\overline{Y}_w$.

$$\overline{Y}_w = \sum W_h \cdot \overline{Y}_h \quad \text{where}$$

(1) $\overline{Y}_h$ are the strata means and

(2) W_h are the strata proportions so that $\sum W_h = 1.00$

It can be noted from the above formula that each strata mean is weighted into the overall weighted mean according to its proper proportion. Correspondingly the variance of the overall weighted mean is also determined according to the weights assigned to the strata. This variance is given by:

$$\text{Var}\,(\overline{Y}_w) = \sum W_h^2 \cdot \text{Var}\,(\overline{Y}_h) \quad \text{where}$$

$\text{Var}\,(\overline{Y}_h)$ are the variances of the individual strata means which are represented in the weighted mean.

The difference between the two weighted country means was tested to determine if it was significantly different from zero. The Student's t-test for a significant difference between the means of two independent samples was used.

The W_h's (strata proportions) used for the United States sample and the

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[71] Leslie Kish, Survey Sampling, (New York: John Wiley and Sons, Inc., 1965) p. 78.

United Kingdom elementary sample reported in Tables 4 and 6 of the preceding chapter will not be repeated here. The W_h's for the first and second year secondary, United Kingdom, were .013 and .987 respectively for Northern Ireland and England and Wales. For the final year secondary, United Kingdom, the English proportion, which was .864, was split .384 for the graduates and .480 for the students enrolled in the regular training college program.

The reporting of results is divided between elementary and secondary student classifications. The variables are grouped in the tables into three broad areas. The Ryans Teacher Characteristics Measures appear with the Minnesota Teacher Attitude Inventory scores. These comprise a total of ten measures of teacher characteristics and attitudes. The eight scores of academic knowledge are grouped in a single table along with the Cattell Culture-Fair Intelligence Test (IPAT) results. The academic knowledge scores are from the Comprehensive College Testing Program (CCTP) test battery with the exception of mathematics which is from the Cooperative General Culture Test (CGCT) battery. Finally the professional knowledge measures from the Teacher Education Examination Program (TEEP) make up the third group.

The tables give the means for each country by student classification. Immediately following a table of means is a table giving the results of the statistical test for the difference between means. The .01 level of significance was used as the rejection level for the null hypothesis. The value required for significance at this level is 2.58. Since the numbers of degrees of freedom in all cases was in the hundreds, the value from the normal approximation was used. In the case of a significant difference, the greater country mean is marked with an asterisk (*).

The names of the nine Ryans scales appear below. They are designated by their letters and identifying key words in the tables.

Symbol designation and definition of the nine Ryans Teacher Characteristic measures:

B:	Learning centered (traditional) vs. Child-centered (permissive) educational viewpoints.
I:	Superior verbal understanding (comprehension) vs. poor verbal understanding.
S:	Emotional stability (adjustment) vs. instability.
X:	Warm understanding, friendly vs. aloof, egocentric, restricted classroom behavior.
Y:	Responsible, businesslike, systematic vs. evading, unplanned, slipshod classroom behavior.
Z:	Stimulating, imaginative vs. dull, routine, classroom behavior.
R:	Favorable vs. unfavorable opinions of pupils.
R_1:	Favorable vs. unfavorable opinions of democratic classroom procedures.
Q:	Favorable vs. unfavorable opinions of administrative and other school personnel.

The higher score is associated in each scale with the first description or more favorable opinion or characteristic.

Elementary

Teacher Characteristics and Attitudes. The mean scores on the Ryans measures and MTAI appear in Table 9 and the results of the statistical test for the difference between means on the Ryans and MTAI are given in Table 10. The pattern of significant differences on the "B" scale has the United States mean consistently high. The same is true of the "Q" scale. The "I" scale had significant differences in each year with the United Kingdon mean high. The rest of the scales had no pattern by years. The MTAI showed a significant difference for only the first year with the United States indicating a more child-centered orientation.

TABLE 9

Mean Scores on Ryans Teacher Characteristic Measures and Minnesota Teacher Attitude Inventory for Elementary By Country and Student Classification

Measure		Year and Country					
		First		Second		Final	
		U.K.	U.S.	U.K.	U.S.	U.K.	U.S.
Ryans B	Learning Centered	47.88	50.47*	47.48	50.37*	47.64	50.62*
I	Verbal Understanding	64.28*	62.75	64.95*	62.67	64.62*	62.73
S	Emotional Stability	53.87	53.99	53.51	54.17	53.16	54.43*
X	Understanding; Friendly	53.50	54.19	53.84	54.45	53.92	54.43
Y	Responsible	50.85	50.92	51.08	51.08	51.68	51.22
Z	Stimulating; Imaginative	55.37	54.98	55.73	55.16	55.48	55.53
R	Opinion of Students	52.24	53.20	52.45	53.89*	52.75	53.41
R_1	Opinion of Classroom Procedures	52.98	52.89	53.36	53.19	53.09	53.12
Q	Opinion of Administrative Personnel	47.79	49.25*	47.72	49.74*	47.39	49.76*
MTAI		24.09	32.17*	33.54	34.34	33.29	34.23

*Significantly greater than the corresponding mean at .01 level

TABLE 10

The "t"-Values* of Significance Tests for the Difference Between Country Means; Ryans Teacher Characteristic Measures and Minnesota Teacher Attitude Inventory for Elementary

Measure	Year		
	First	Second	Final
Ryans B Learning Centered	8.93	11.15	11.92
I Verbal Understanding	3.63	6.93	5.39
S Emotional Stability	0.37	2.16	4.20
X Understanding; Friendly	1.93	1.87	1.68
Y Responsible	0.25	0.00	1.85
Z Stimulating; Imaginative	1.31	2.11	0.19
R Opinion of Students	2.37	4.03	1.91
R_1 Opinion of Classroom Procedures	0.51	1.20	0.28
Q Opinion of Administrative Personnel	3.62	5.50	6.69
MTAI	3.38	0.38	0.47

*A value of 2.58 required for $p \leq .01$

The results of the "B" scale indicate that the United States students were more learning-centered than their British counterparts. The "Q" scale indicates a more favorable opinion of school personnel on the part of the U.S. students. The result for first year United States students on the MTAI is in contradiction with the results obtained on the Ryans "B" scale.

The "I" score results indicate higher verbal understanding scores for the British students. Assuming verbal understanding to be closely associated with intelligence measures, these results are consistent with the Cattell Culture-Fair Intelligence Test (IPAT) results discussed below. The United States students tended to have the higher means on the "S" and "R" scales but in each instance the difference was significant in only one year.

Academic Knowledge. The means on the academic measures showed a large number of significant differences and some quite definite patterns. Reference is made to Tables 11 and 12. The British persist in a significantly higher mean in English composition and the humanities. The United States means are consistently higher in the natural sciences measures. Mathematics results indicated that United Kingdom students have higher means with the difference being significant in the second and final years. It is interesting to note that the United States mathematics means decrease from first to final year and the British attained their lowest mean in the final year.

The British also scored significantly higher means on the IPAT intelligence test for the second and final years. The British intelligence scores were relatively stable across the three years but the United States means dropped markedly for the second and final years. In looking at the academic mean scores across the years there is relatively little change within a country. For some of the scores there tends to be a slight decrease in the final years.

TABLE 11

Mean Scores on Academic Achievement Measures and Cattell Culture-Fair Intelligence Test (IPAT) for Elementary By Country and Student Classification

Measure	Year and Country					
	First		Second		Final	
	U.K.	U.S.	U.K.	U.S.	U.K.	U.S.
English Composition	58.69*	55.06	59.50*	52.29	59.27*	52.74
Biological Science	20.32	23.40*	21.39	22.98*	20.83	22.24*
Physical Science	16.52	19.13*	17.28	18.83*	16.40	18.18*
Total Natural Science	36.85	42.63*	38.75	41.90*	37.33	40.44*
Fine Arts	23.31*	21.10	24.57*	21.08	25.12*	21.14
Literature	24.79*	20.52	25.81*	20.12	25.94*	20.67
Total Humanities	45.79*	40.25	47.84*	40.69	47.83*	39.79
Mathematics	19.75	18.99	20.10*	17.07	18.41*	16.87
IPAT	112.97	111.22	113.49*	108.67	112.15*	107.81

*Significantly greater than the corresponding mean at .01 level.

TABLE 12

The "t"-Values* of Significance Tests for the Difference Between Country Means; Academic Achievement Measures and Cattell Culture-Fair Intelligence Test (IPAT) for Elementary

Measure	Year		
	First	Second	Final
English Composition	4.14	9.94	8.66
Biological Science	5.70	3.28	2.68
Physical Science	5.98	3.67	4.21
Total Natural Science	6.67	3.87	3.65
Fine Arts	4.69	8.70	9.57
Literature	8.86	13.43	11.35
Total Humanities	6.18	8.57	10.61
Mathematics	1.47	6.25	3.22
IPAT	1.59	5.04	4.66

*A value of 2.58 required for $p \leq .01$

Professional Knowledge. The professional knowledge measures, with the exception of the Elementary Education measure, showed the same pattern; namely, the United States mean significantly higher than the United Kingdom mean. There were no significant differences in the Elementary Education means. These results appear in Tables 13 and 14.

Secondary

Teacher Characteristics and Attitudes. The means of the Ryans measures indicated a definite pattern on only one scale. This was the "B" scale and pattern was for the United States mean to be significantly higher for all three years. Tables 15 and 16 provide the data. This was the same pattern as the "B" scale means for elementary. The "Z" scale had significant differences but the country pattern was not consistent. The "Q" and "I" scales which had definite patterns for the elementary means came up with only one significant difference each. The direction of difference was the same as for the elementary means. There were no significant differences on the MTAI.

The "B" scale pattern again indicated that United States students were more learning-centered than the United Kingdom students. The one significant result on the "I" scale in the final year was consistent with the result on the (IPAT) intelligence test which appear in Table 17. The United States students in second and final years on the "Q" scale appear to have more favorable opinions of school personnel.

Academic Knowledge. The significant differences between means on the academic measures favor the United Kingdom. These results are apparent in Tables 17 and 18. In only one case did United States students attain a significantly higher mean and that was on biological science for first year students. The patterns are not as definitive for the secondary students as

TABLE 13

Mean Scores on Professional Knowledge Measures for Elementary By Country and Student Classification

Measure	Year and Country					
	First		Second		Final	
	U.K.	U.S.	U.K.	U.S.	U.K.	U.S.
Child Development	18.46	20.03*	19.75	20.72*	19.95	21.95*
Guidance and Measurement	14.03	17.50*	15.76	18.56*	16.34	19.86*
Instructional Methods	17.09	18.25*	18.13	19.65*	18.83	20.37*
Elementary Education	56.51	55.22	59.55	59.17	60.01	61.73

*Significantly greater than the corresponding mean at .01 level.

TABLE 14

The "t"-Values*of Significance Tests for the Difference Between Country Means; Professional Knowledge Measures for Elementary

Measure	Year		
	First	Second	Final
Child Development	4.89	3.41	7.20
Guidance and Measurement	11.13	9.60	11.93
Instructional Methods	3.57	5.49	5.42
Elementary Education	1.58	0.53	2.53

*A value of 2.58 required for $p \leq .01$

TABLE 15

Mean Scores on Ryans Teacher Characteristic Measures and Minnesota Teacher Attitude Inventory for Secondary By Country and Student Classification

Measure	Year and Country					
	First		Second		Final	
	U.K.	U.S.	U.K.	U.S.	U.K.	U.S.
Ryans B Learning Centered	48.12	51.36*	48.78	51.08*	49.11	51.14*
I Verbal Understanding	64.20	63.27	63.92	64.12	66.10*	63.67
S Emotional Stability	54.60	54.80	54.43	54.52	54.46	55.10
X Understanding; Friendly	53.01	52.27	51.76	52.88*	52.12	52.39
Y Responsible	51.19	50.85	50.51	50.97	50.90	50.97
Z Stimulating; Imaginative	55.50*	54.40	54.22	55.07*	54.58	55.00
R Opinion of Students	52.32	51.04	51.24	51.24	51.41	50.94
R_1 Opinion of Classroom Procedures	52.90	52.35	52.61	52.72	52.59	52.45
Q Opinion of Administrative Personnel	47.84	48.50	46.37	48.29*	46.79	48.53*
MTAI	22.78	20.34	19.13	25.42	20.57	21.72

*Significantly greater than the corresponding mean at .01 level

TABLE 16

The "t"-Values* of Significance Tests for the Difference Between Country Means; Ryans Teacher Characteristic Measures and Minnesota Teacher Attitude Inventory for Secondary

Measure	Year		
	First	Second	Final
Ryans B Learning Centered	8.03	6.87	7.39
I Verbal Understanding	2.05	0.48	6.31
S Emotional Stability	0.47	0.21	1.89
X Understanding; Friendly	1.55	2.66	0.84
Y Responsible	0.93	1.41	0.25
Z Stimulating; Imaginative	2.86	2.62	1.60
R Opinion of Students	2.49	0.00	1.28
R_1 Opinion of Classroom Procedures	2.44	0.59	0.84
Q Opinion of Administrative Personnel	1.38	4.14	4.69
MTAI	0.83	2.29	0.54

*A value of 2.58 required for $p \leq .01$

TABLE 17

Mean Scores on Academic Achievement Measures and Cattell Culture-Fair Intelligence Test (IPAT) for Secondary By Country and Student Classification

Measure	Year and Country					
	First		Second		Final	
	U.K.	U.S.	U.K.	U.S.	U.K.	U.S.
English Composition	57.04	55.07	58.13	57.02	64.30*	55.52
Biological Science	22.86	25.50*	24.40	26.00	24.82	25.48
Physical Science	21.79	22.12	21.61	22.31	23.28*	21.39
Total Natural Science	44.66	47.64	46.01	48.39	48.14	46.96
Fine Arts	23.35*	20.47	23.98*	21.41	26.36*	22.32
Literature	24.40*	21.80	24.53	23.62	27.89*	23.65
Total Humanities	45.25*	39.95	45.70*	42.81	50.88*	43.79
Mathematics	25.86*	22.86	26.63*	23.01	26.60*	21.67
IPAT	114.97	113.14	115.30	112.36	115.53*	111.12

*Significantly greater than the corresponding mean at .01 level

TABLE 18

The "t"-Values* of Significance Tests for the Difference Between Country Means; Academic Achievement Measures and Cattell Culture-Fair Intelligence Test (IPAT) for Secondary

Measure	Year		
	First	Second	Final
English Composition	1.93	1.06	10.40
Biological Science	3.28	1.98	1.04
Physical Science	0.46	1.03	3.26
Total Natural Science	2.27	1.76	1.07
Fine Arts	4.92	4.61	8.35
Literature	3.93	1.43	7.46
Total Humanities	4.95	2.72	7.45
Mathematics	3.28	4.00	6.80
IPAT	1.43	2.43	4.51

*A value of 2.58 required for $p \leq .01$

was the case with the elementary student population.

The British were quite consistent in scoring a significantly higher mean in the humanities and mathematics measures. In one case the difference was not significant, that for second year students in literature. The final year also showed the United Kingdom to have significantly higher means on English composition and physical science measures.

The IPAT intelligence scores were quite stable within a country across the years. The United States tended to decrease slightly while the British tended to increase slightly across the years. The difference between the IPAT means for the final year was significant.

Professional Knowledge. The guidance and measurement means were significantly different, favoring the United States across the three years. Tables 19 and 20 indicate the data. The United States attained higher means on child development and significantly so for the second and final years. The United States mean for instructional methods was significantly higher at the second year only. The overall tendency was for the United States to attain the higher mean on the professional knowledge measures.

Analysis of Trends Across the Three Years of Training

The discussion in this section is based on the relative positions of the means across the three years of training. Pictorial representations of these relative positions appear in Figures 1-23 inclusive. The measures are discussed in the same order as in the previous section of this chapter, i.e., first, Ryans Teacher Characteristics measures and the Minnesota Teacher Attitude Inventory score are considered; second, academic knowledge measures and the Cattell Culture-Fair Intelligence Test results are examined; and third, professional knowledge measures are taken into account. Elementary and

TABLE 19

Mean Scores on Professional Knowledge Measures for Secondary By Country and Student Classification

Measure	Year and Country					
	First		Second		Final	
	U.K.	U.S.	U.K.	U.S.	U.K.	U.S.
Child Development	18.26	18.48	18.94	20.31*	19.88	20.90*
Guidance and Measurement	14.35	17.19*	16.13	19.31*	17.71	20.22*
Instructional Methods	17.44	17.07	17.44	19.18*	19.63	20.27

*Significantly greater than the corresponding mean at .01

TABLE 20

The "t"-Values* of Significance Tests for the Difference Between Country Means; Professional Knowledge Measures for Secondary

Measure	Year		
	First	Second	Final
Child Development	0.59	4.33	3.58
Guidance and Measurement	8.27	9.48	8.16
Instructional Methods	1.04	4.60	2.13

*A value of 2.58 required for $p \leq .01$

secondary plots appear on the same figures. The one exception is Figure 23 for the Elementary Education test.

Tables providing strata means for all measures, elementary and secondary, for first, second and final years have also been prepared. These will be found in Appendix H in the three groupings mentioned above for the United Kingdom, first, and the United States, second. These tables are numbered 27 through 62 inclusive. From the data contained in these tables, six _selected_ strata means tables have been prepared to indicate the striking differences in means, final year, for selected strata in the United Kingdom and the United States. These tables appear in the body of this chapter and are numbered 21 to 26.

Figure I indicates the means of the Ryans B score which remain quite consistent across the years for the United States and the United Kingdom elementary. The British Isles secondary shows a trend to become more "learning-centered" from the first to the third years. This trend toward "learning-centeredness" for the final year is in part due to the inclusion of Scottish students and English graduates. The United States is consistently more learning-centered than the British Isles, with elementary slightly less so than secondary.

The Ryan I score means depicted in Figure 2 which indicate verbal understanding remain consistent across the years for three of the groups. The one exception is the British Isles secondary. This group made a substantial increase between the second and final years. An inspection of strata means in Table 23 reveals that this increase is, to a considerable extent, due to the inclusion of Scottish and English graduates in the final year. Tables 21 and 23 also reveal NCATE, Public and Private, definitely out stripping Non-NCATE, public and private.

The emotional stability scores (Ryans S measure) as plotted in Figure 3 are quite consistent with a slight increase across the years for three of the groups. The one exception is the British Isles elementary who indicate a decreasing pattern across the three years.

The measure of warmth, understanding, etc., as indicated by the Ryans X score, Figure 4, show the elementary groups to be higher than secondary with a slight increase across the years. The United States secondary is quite consistent with a slight increase in the middle year. The United Kingdom secondary attain their highest score in the first year and lowest in the second. There is a recoup in the third but not back to the level of first year.

Figure 5 shows that means for the Ryans Y scores are very closely grouped and for three groups show a slight increase across the years. The United Kingdom secondary shows a slightly erratic pattern. Very similar patterns exist for the means of the Ryans Z score, Figure 6. The spread is slightly greater but again the United Kingdom secondary has the most erratic pattern. Both of these measures reflect classroom behavior.

The patterns of means for the Ryans R scores, Figure 7, are quite different with no two groups having the same pattern. Elementary in both countries tend to have the more favorable opinion of pupils and indicates an increase between the first and third years. The United States secondary is low on this score and shows essentially no change across the years. The United Kingdom secondary scored relatively high in the first year but then dropped markedly in the final two years, very close to the level of the

United States secondary. The means of the opinions of democratic classroom procedure measure (Ryans R_1 score), Figure 8, showed the elementary again to be more favorably inclined. However, the groups are closer together than on the R scale. The means change very little across the years with a slight tendency to increase between the first and third years for all groups except the United Kingdom secondary.

The means for the Ryans Q score, Figure 9, generally indicate elementary to be more favorably disposed toward administrative personnel and United States more so than the United Kingdom. The United States elementary shows a slight increase across the years. The British Isles students attained their highest means in the first year with elementary remaining virtually unchanged across the years and the secondary showing a marked drop for the second year with a slight recoup in the final year.

The Minnesota Teacher Attitude Inventory means reveal somewhat differing and erratic patterns as indicated in Figure 10. The elementary score higher than the secondary with the marked increase occurring between the first and second year. The United States secondary shows a marked increase between the first and second years with a decrease essentially back to the first year level by the third year. The British Isles secondary decrease between the first and second years with a slight increase to the final year.

The attitudes and teachers characteristics scores show relatively little change across the three years of training. There are about as many that go in an unfavorable direction as those that go in a favorable direction. The elementary students tend to be slightly higher on child-centeredness and related measures. An examination of strata means in Tables 21 and 23 does reveal unfavorable means directions for United States,-Non-NCATE,-private, elementary and United States-Non-NCATE-public and Scotland, secondary. United States, NCATE-public, elementary means were, on the other hand, quite high in a favorable direction.

The English composition means in Figure 11 indicate almost no increase between the first and final years for United Kingdom elementary and United States secondary. The United States secondary attained their highest mean in the second year which may be a reflection of recency of instruction. The United Kingdom secondary showed a marked increase between the second and final years. The United States elementary attained their highest mean in the first year, dropped down for the second year, and essentially maintained that level for the final year. Strata means in Table 24 again indicate the upward pull of Scottish students and English university graduates.

All groups in Figure 12 except the United States elementary showed increase in mean biological science scores between the first and second years. However, all groups with the exception of British Isles secondary indicated a downward trend between the second and final years. The United States secondary indicated little change across the three years. United Kingdom elementary had a similar pattern. United Kingdom secondary showed continued increase across the years.

The physical science means, Figure 13, show essentially no change for the two secondary groups between the first and second years. The United Kingdom secondary then showed a marked increase to the third year and the

United States secondary a decrease. The United States elementary indicates a slight decreasing trend across the years. The United Kingdom elementary showed an increase at the second year but dropped back to first-year level at the final year.

Figure 14 for total natural science means indicate that the United Kingdom secondary made a consistent increase across the years. The other three groups remained essentially the same across the three years.

The means in Figure 15 of the fine arts measure showed consistent increase across the three years with the exception of the United States elementary which remained unchanged. The United Kingdom secondary made their largest increase between the second and final years. The pattern of literature means, Figure 16, is similar to that of the fine arts pattern, with larger fluctuations. The United Kingdom secondary made the large increase between the second and final years. The United States secondary showed the large increase between the first two years and remained constant to the third year. The United States elementary showed a drop to the second year but recouped by the third. The United Kingdom elementary showed a relatively modest increase across the years. The total humanities means, Figure 17, showed little change across the years for the two elementary groups. The secondary groups indicated increases between the first and final years. The large increases came between the first two years for the United States secondary and between the final two years for the United Kingdom secondary.

An inspection of strata means in Tables 22 and 24 reveals that the large increases in science and humanities means between the final two years is at least in part due to the inclusion of Scottish and English graduates in the final year. These two groups tend to score relatively high. For English composition it was the Scottish group that pulled up the mean in the final year. These tables also show that Non-NCATE private and public students tend to score low and pull the United States mean down.

The mathematics means, Figure 18, tend to remain consistent across the years. Elementary means tend to decrease slightly and British secondary shows a slight increase across the years. The United Kingdom elementary and the United States secondary indicated their decreases between the final two years. The United Kingdom elementary had a slight increase between the first and second years. The achievement measures generally showed the secondary to attain the higher means. In fact, a secondary group was highest by the final year for all measures and for several of the measures the secondary groups occupied the top two positions.

The Cattell Culture-Fair Intelligence Test (IPAT) means showed a considerable spread and did not remain constant across the years as indicated in Figure 19. The United States groups showed consistent decrease across the years. Again the low final years means for Non-NCATE strata were partially responsible for this situation. The United Kingdom elementary showed an increase to the second year and a decrease to the final year. The United Kingdom secondary showed a slight but consistent upward trend.

The mean scores of the four professional knowledge measures showed increases across the years for all groups on all measures as indicated in Figure 20-23. The child development measure showed the United States to be higher than the United Kingdom and elementary to have a slight edge on secondary. The United States secondary attained the largest single increase and this came between the first and second years.

The guidance and measurement means showed consistent increase across the years. There was a considerable gap between the two countries with the United States high. United Kingdom professional programs do not emphasize guidance content and functions to the extent they are dealt with in the United States. The secondary groups were slightly above the elementary across the years.

The instructional methods means were bunched close together. The United States groups showed their greatest increase between the first two years. The United Kingdom secondary remained almost constant between the first and second years and then made a substantial increase to the third year. This increase is in some part due to the higher scores of the Scottish and English graduates strata.

The elementary education means showed the large increases between the first and second years for both the United States and United Kingdom groups. Between the final two years the United States maintained almost the same rate of increase, but the United Kingdom tapered off markedly. The United Kingdom scored higher than the United States in the first year. This pattern was reversed by the final year with the means being very close at the second year.

The selected strata means in Tables 25 and 26 again reveals the low means of the United States, Non-NCATE-private group which lowered the overall means of United States elementary and secondary on various professional measures.

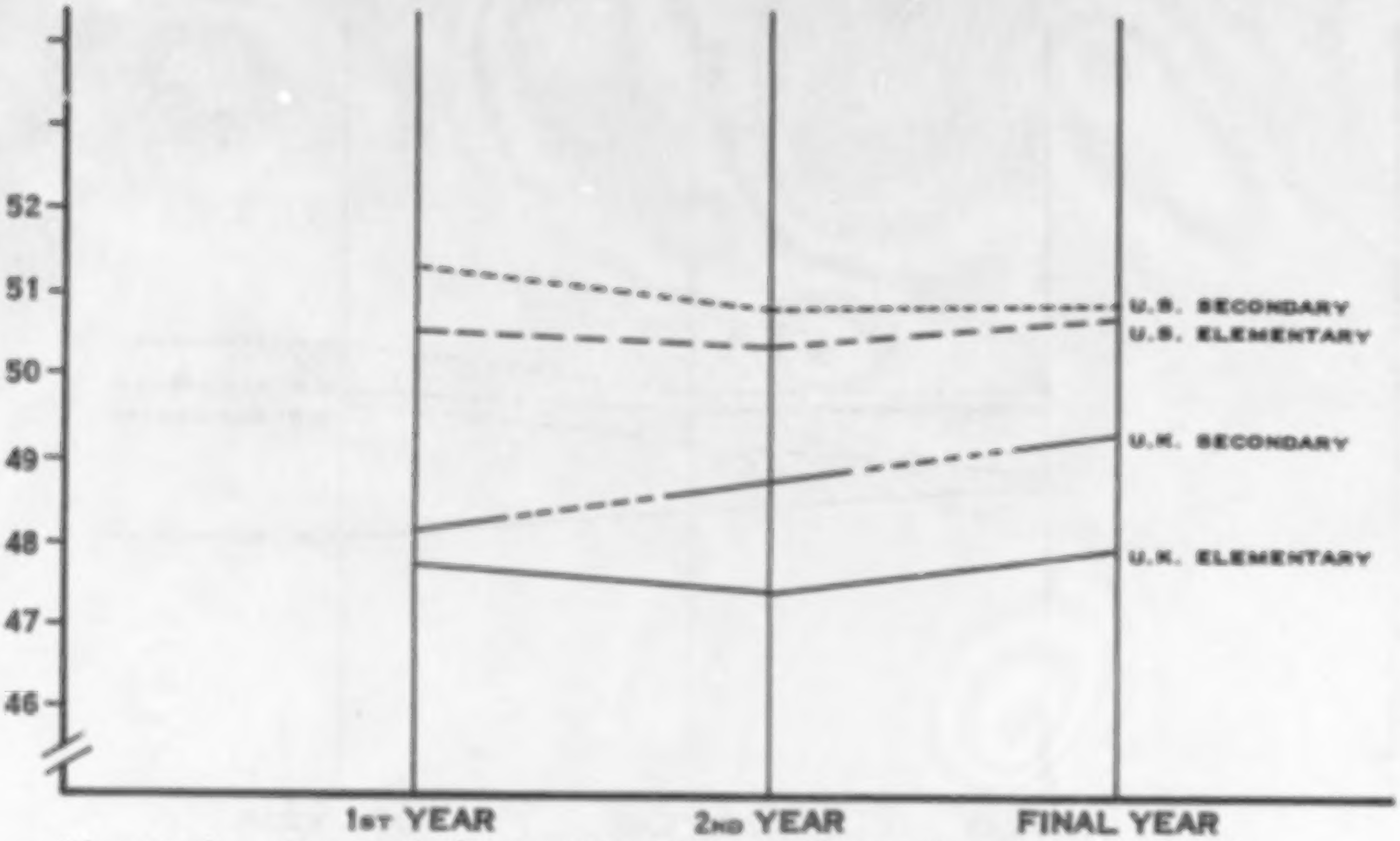

Figure 1. Ryans B (Learning Centered) score means plotted across the three years of training for elementary and secondary.

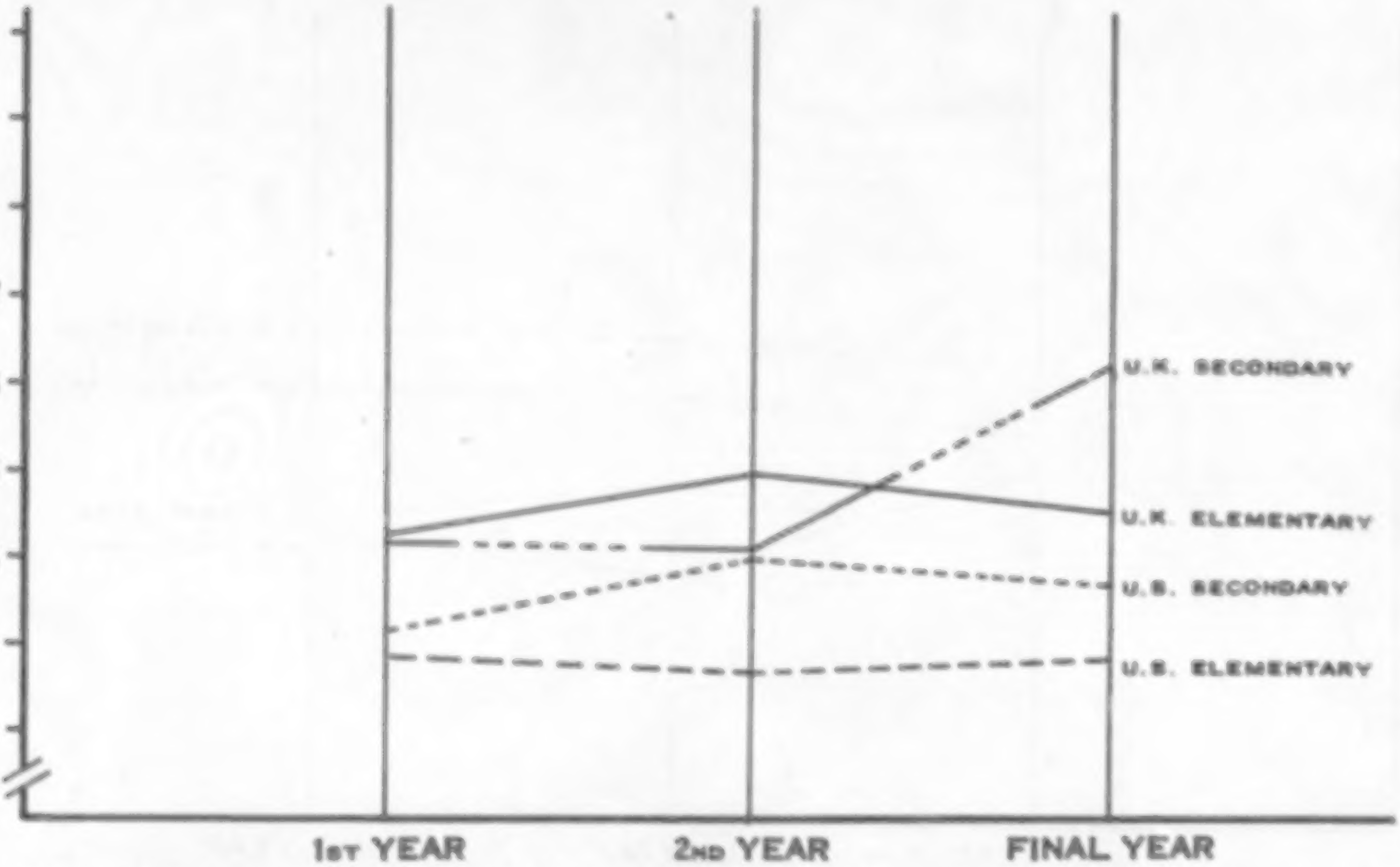

Figure 2. Ryans I (Verbal Understanding) score means plotted across the three years of training for elementary and secondary.

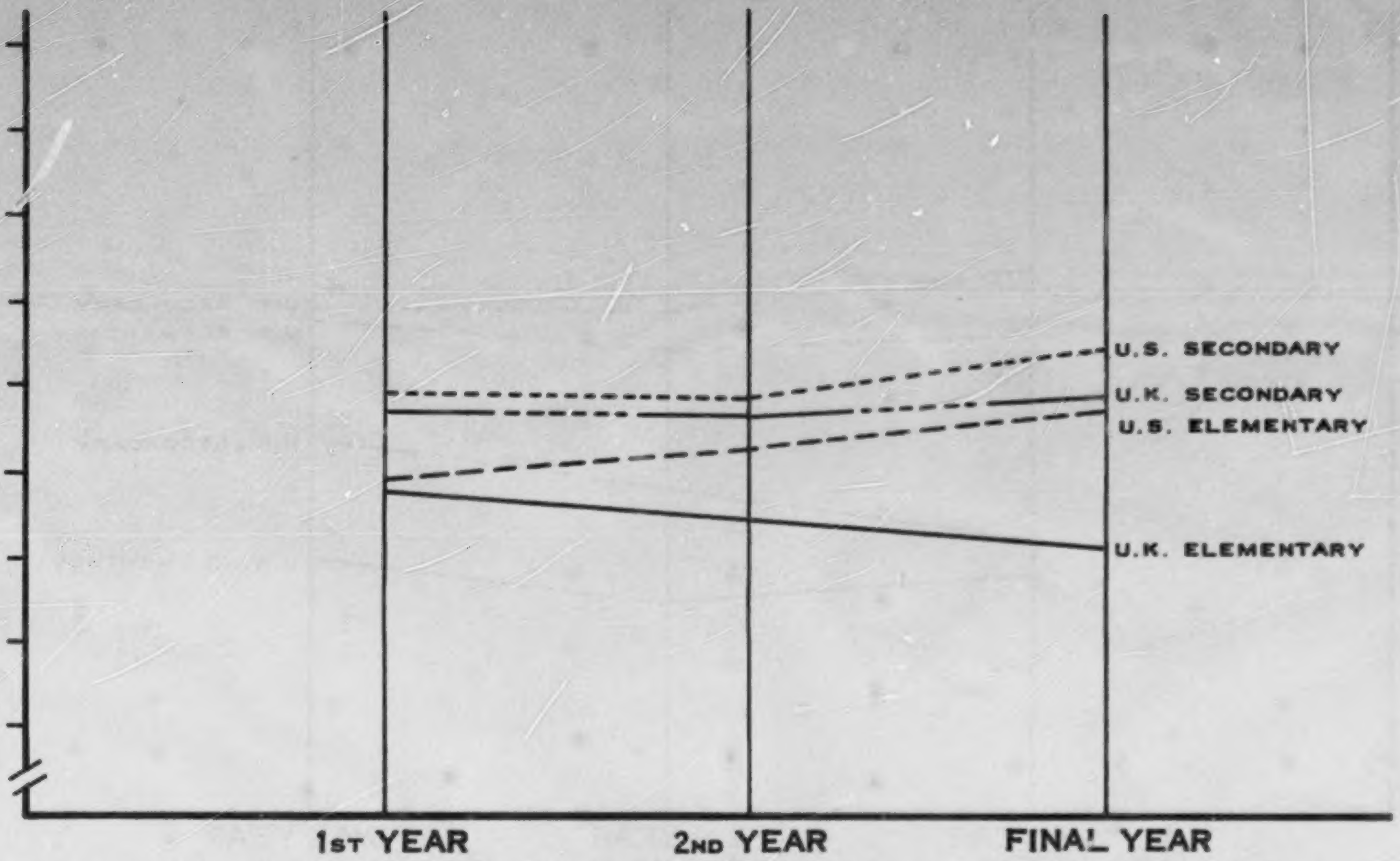

Figure 3. Ryans S (Emotional Stability) score means plotted across the three years of training for elementary and secondary.

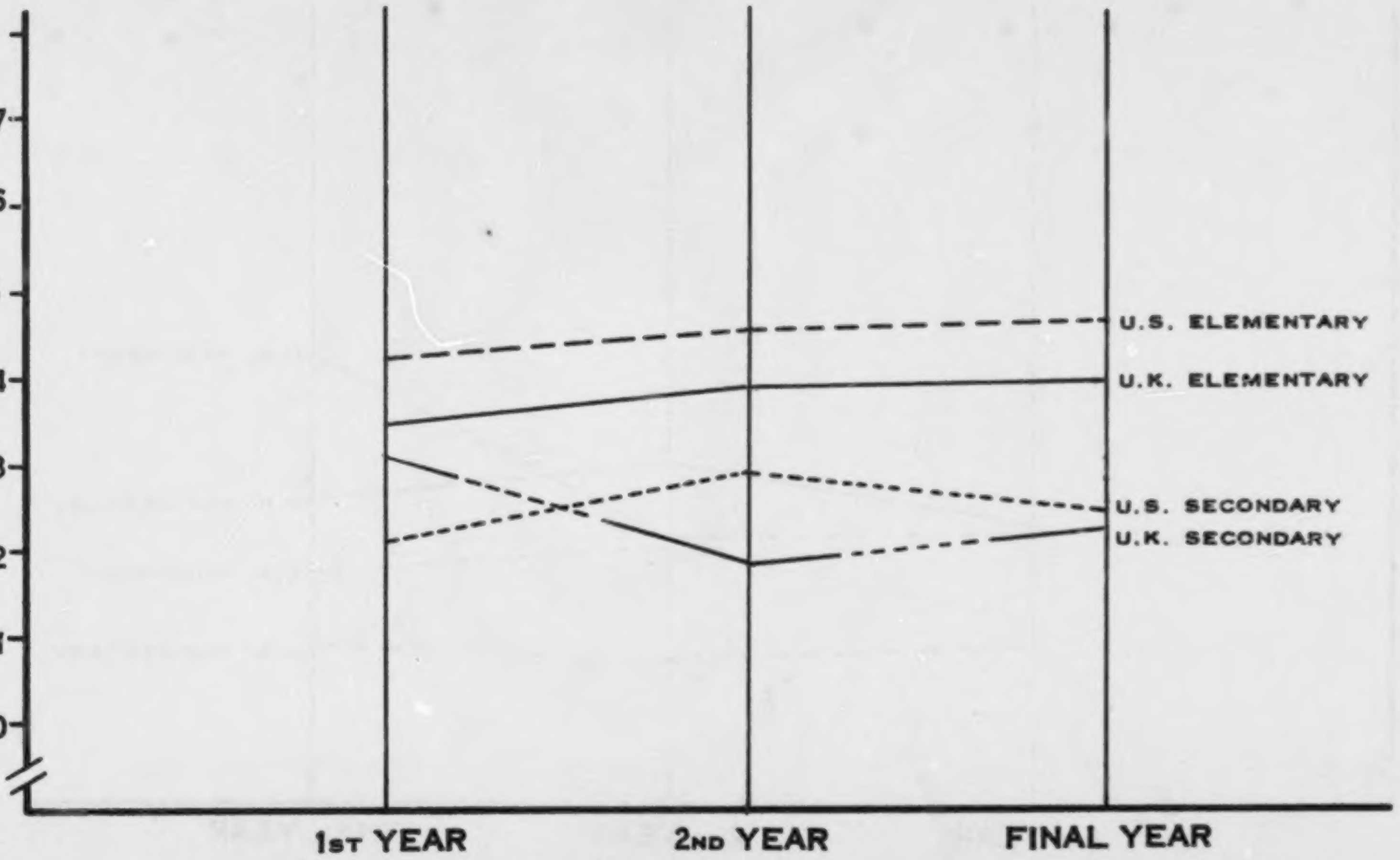

Figure 4. Ryans X (Understanding, Friendly) score means plotted across the three years of training for elementary and secondary.

3

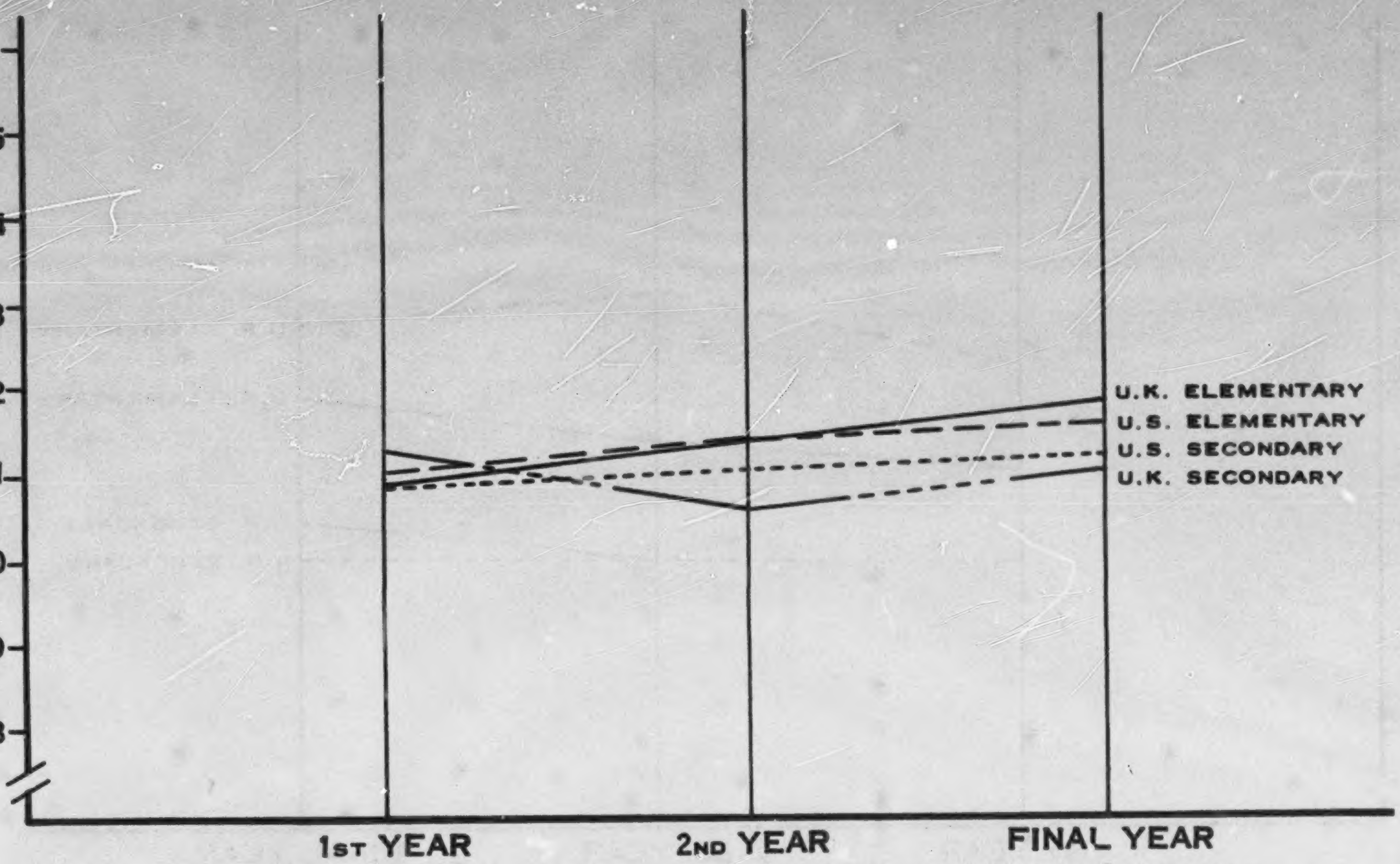

Figure 5. Ryans Y (Responsible) score means plotted across the three years of training for elementary and secondary.

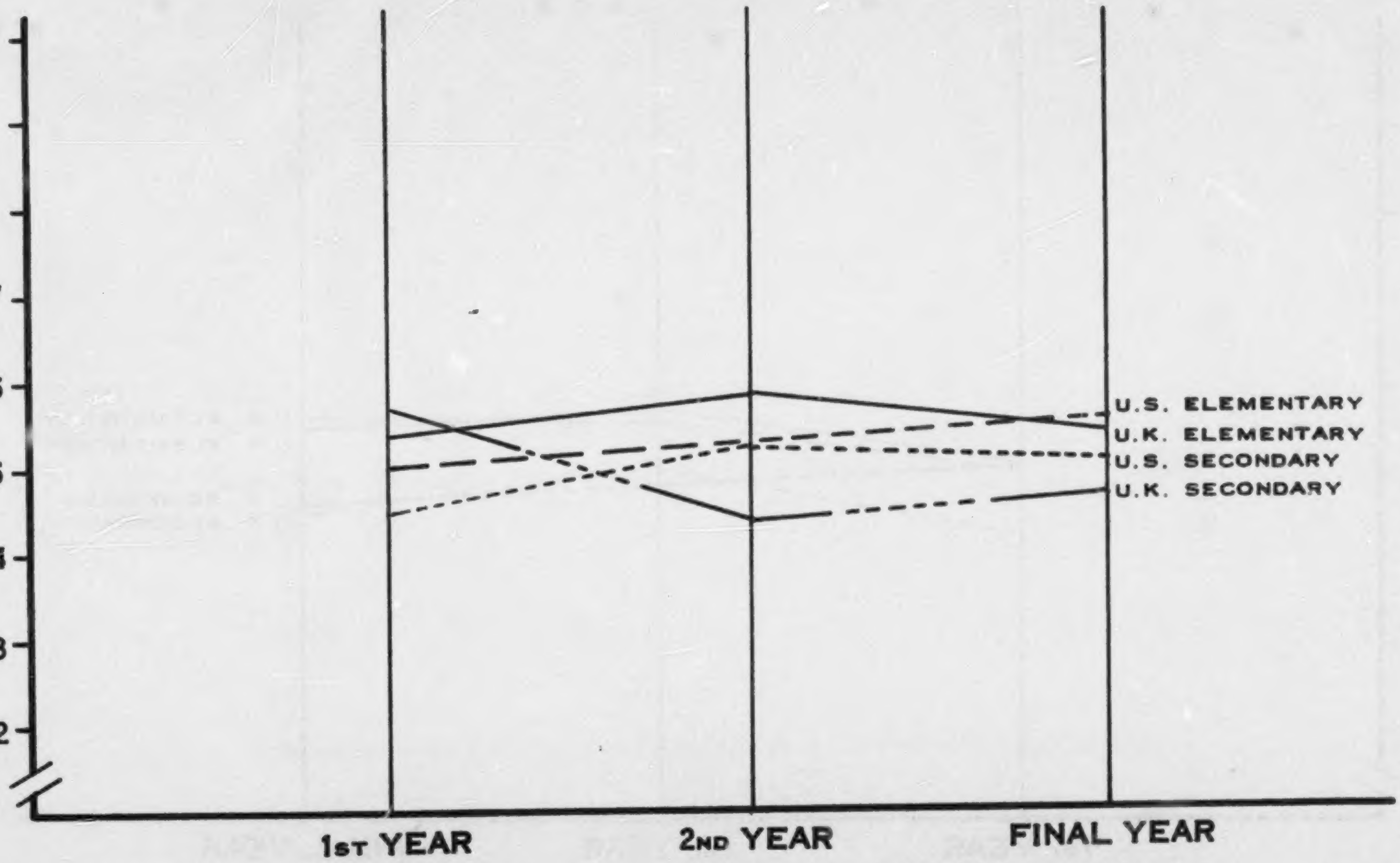

Figure 6. Ryans Z (Stimulating, Imaginative) score means plotted across the three years of training for elementary and secondary.

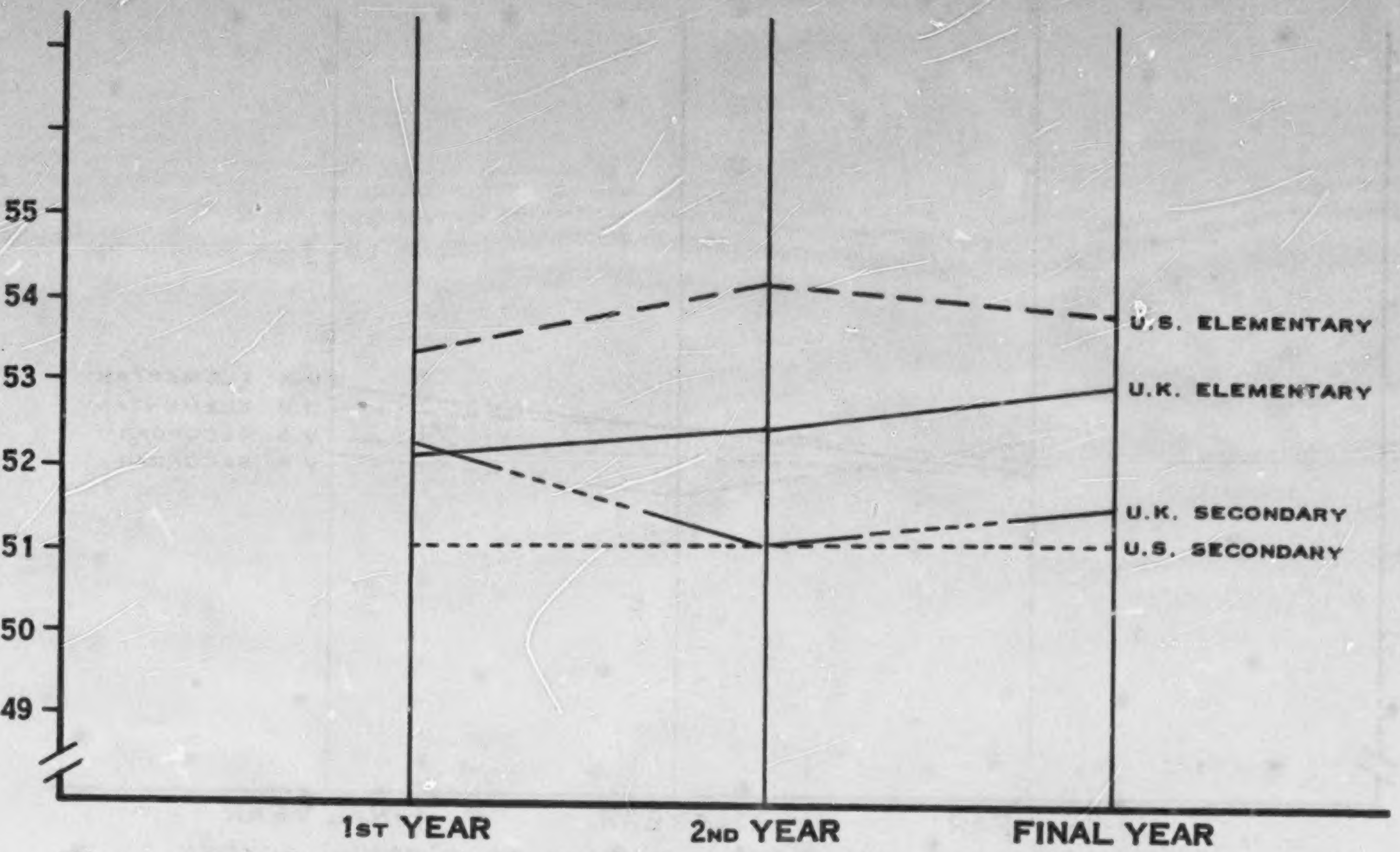

Figure 7. Ryans R (Opinion of Students) score means plotted across the three years of training for elementary and secondary.

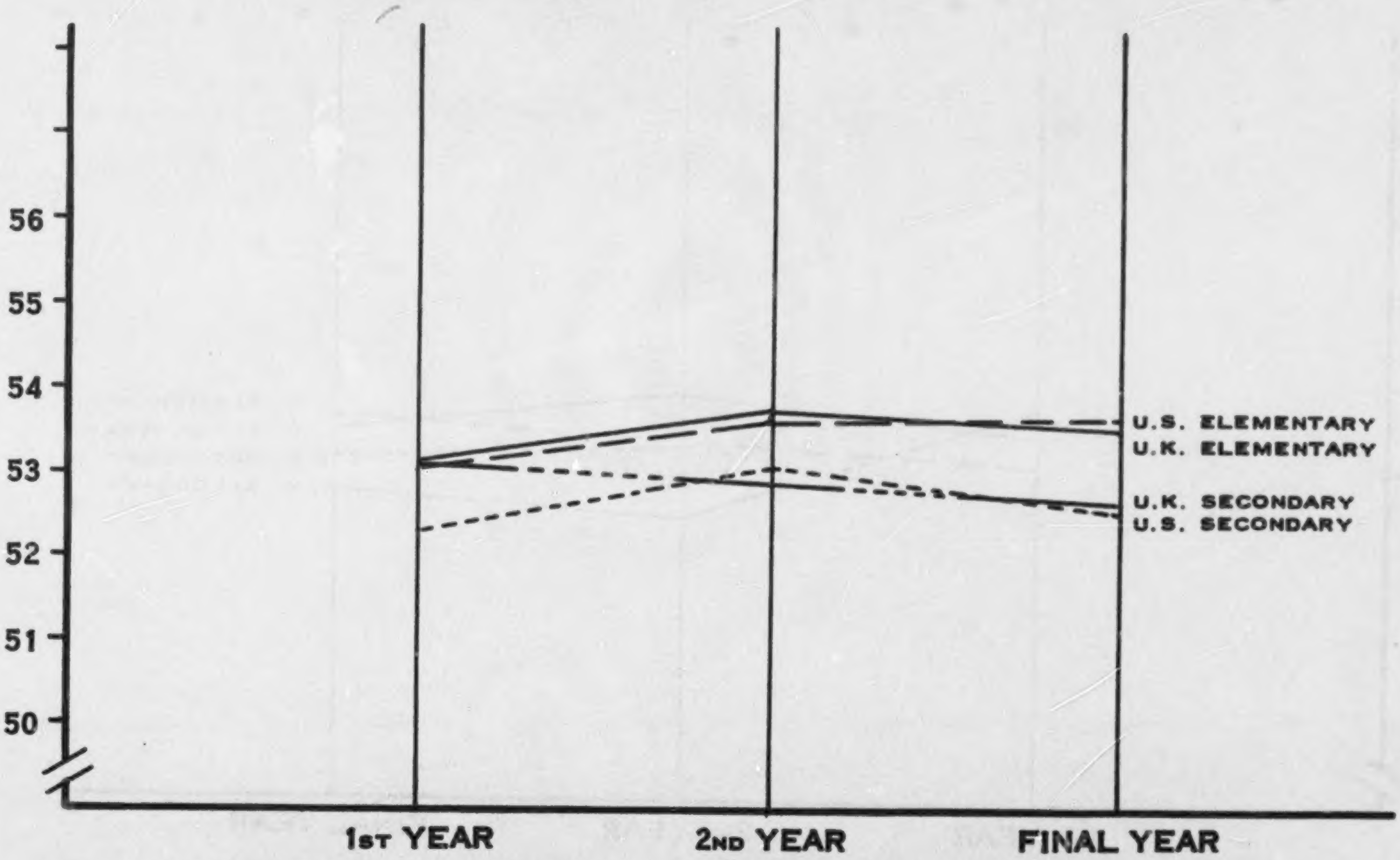

Figure 8. Ryans R_1 (Opinion of Classroom Procedures) score means plotted across the three years of training for elementary and secondary.

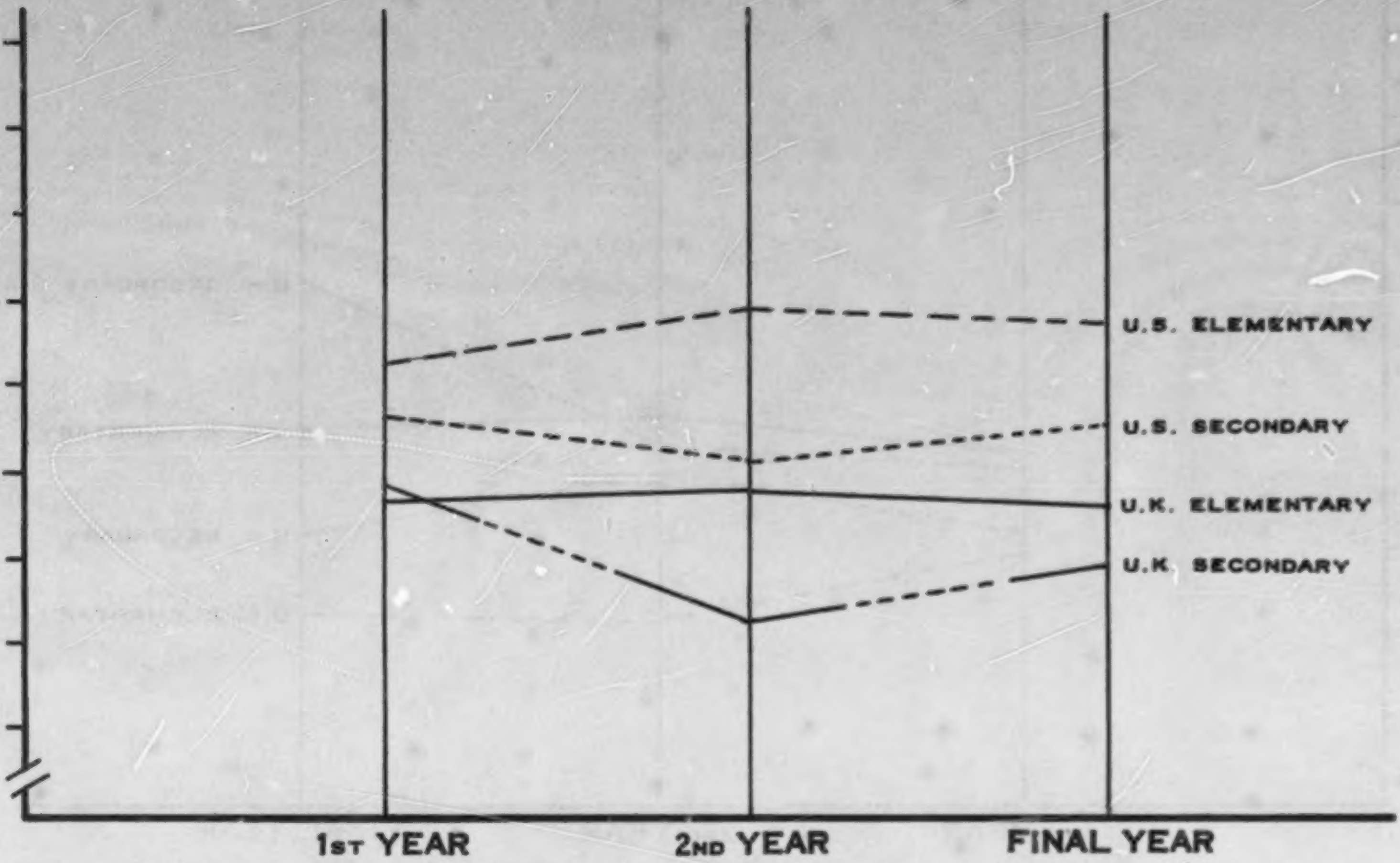

Figure 9. Ryans Q (Opinion of Administrative Personnel) score means plotted across the three years of training for elementary and secondary.

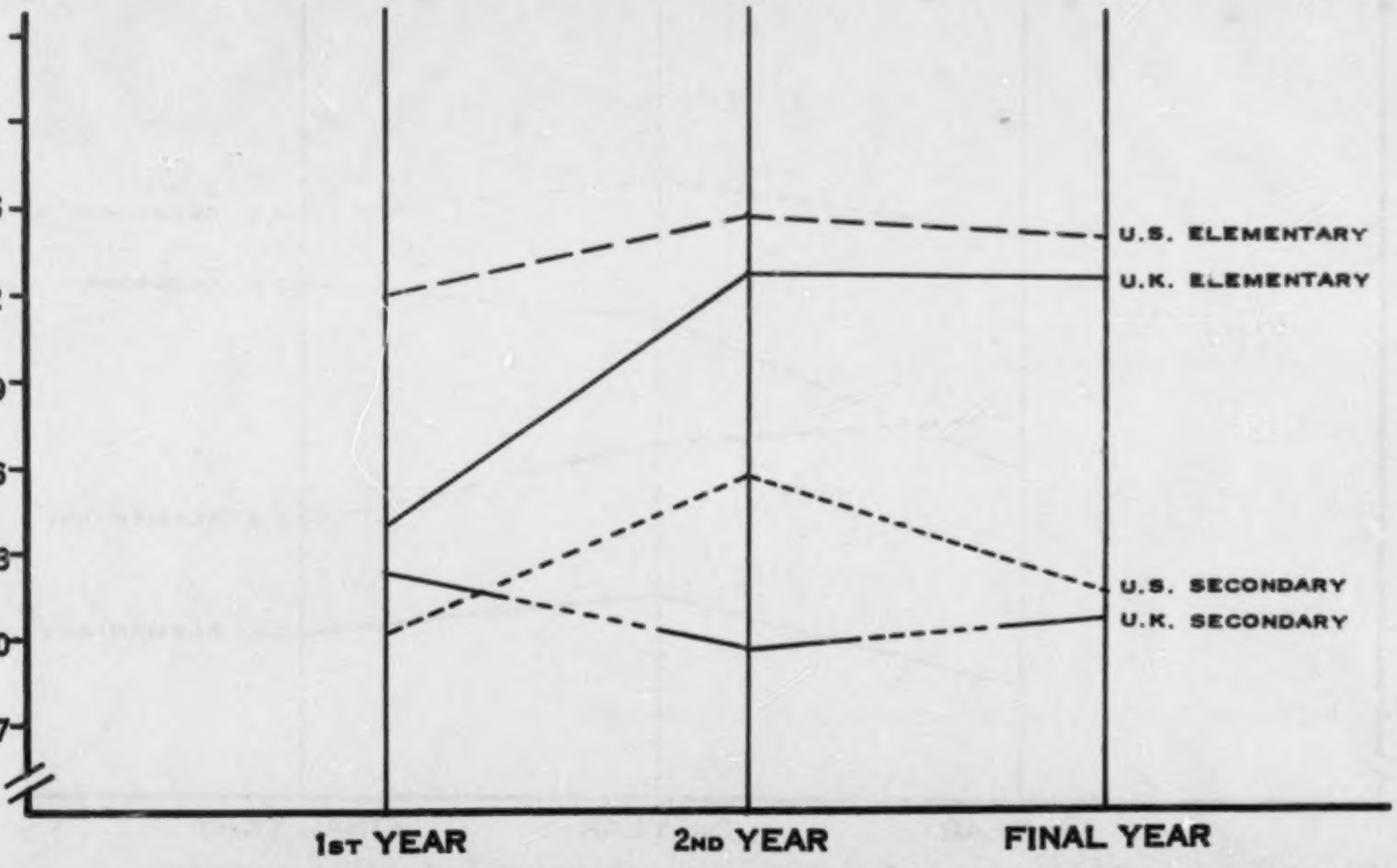

Figure 10. Minnesota Teacher Attitude Inventory score means plotted across the three years of training for elementary and secondary.

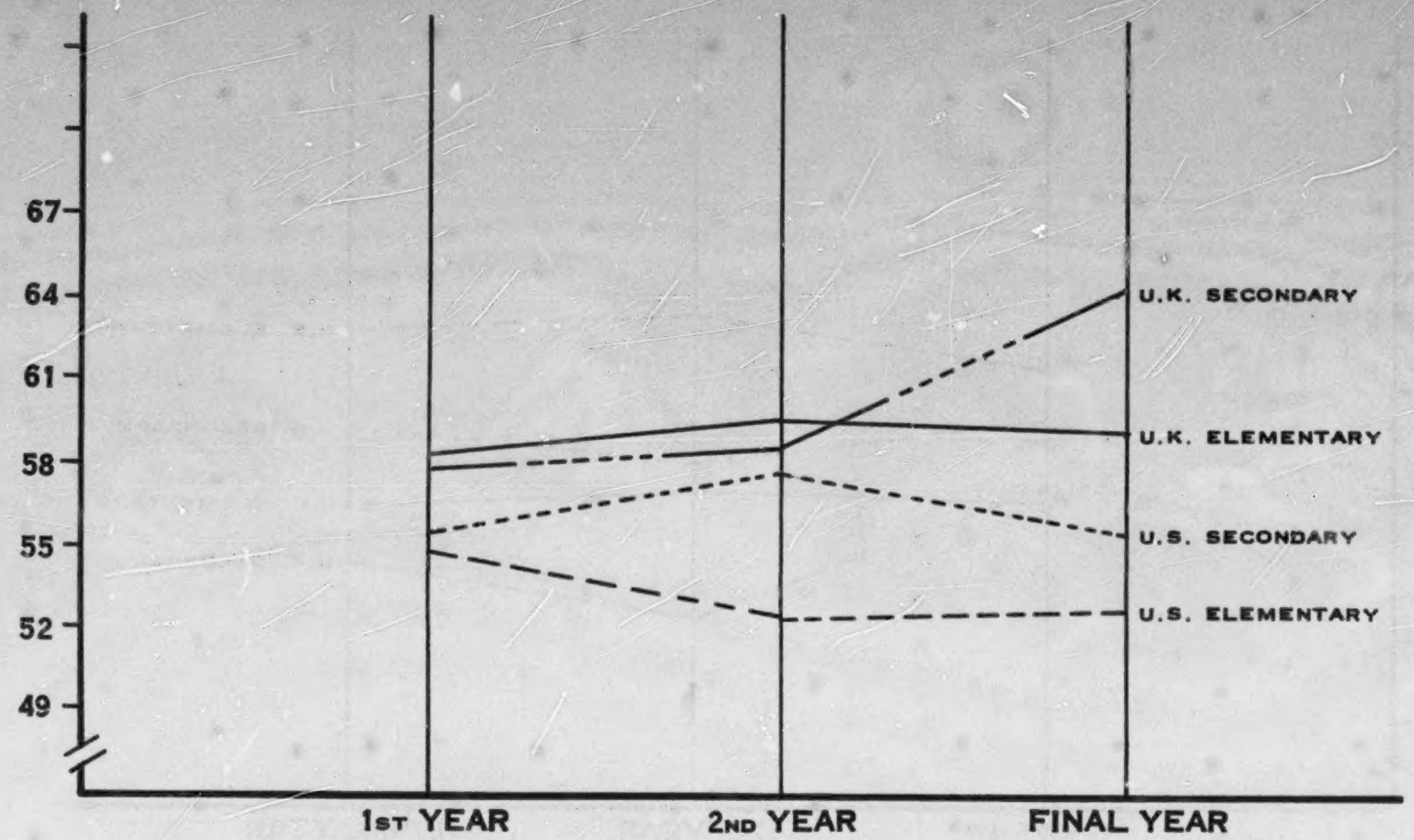

Figure 11. English Composition score means plotted across the three years of training for elementary and secondary.

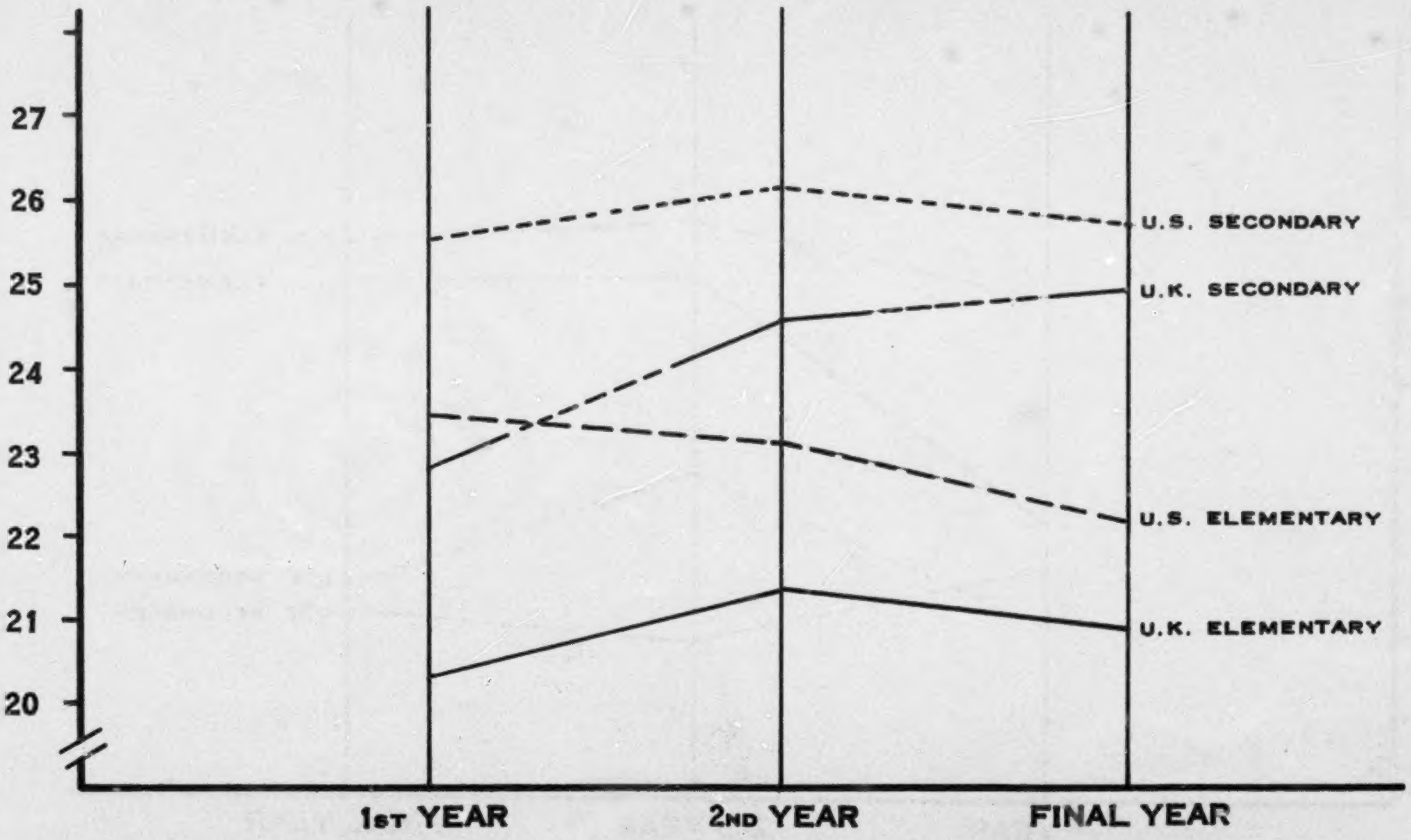

Figure 12. Biological Sciences score means plotted across the three years of training for elementary and secondary.

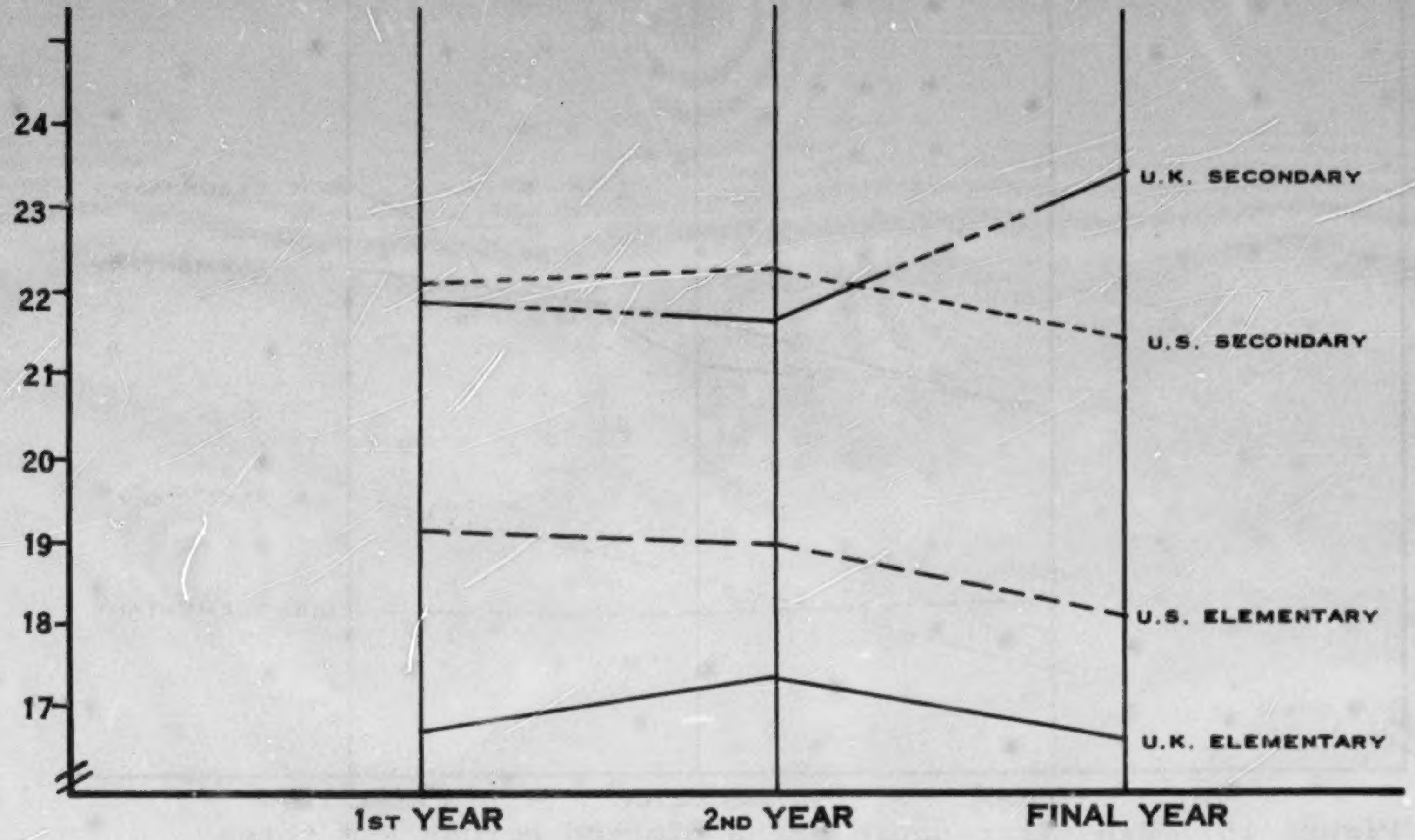

Figure 13. Physical Science score means plotted across the three years of training for elementary and secondary.

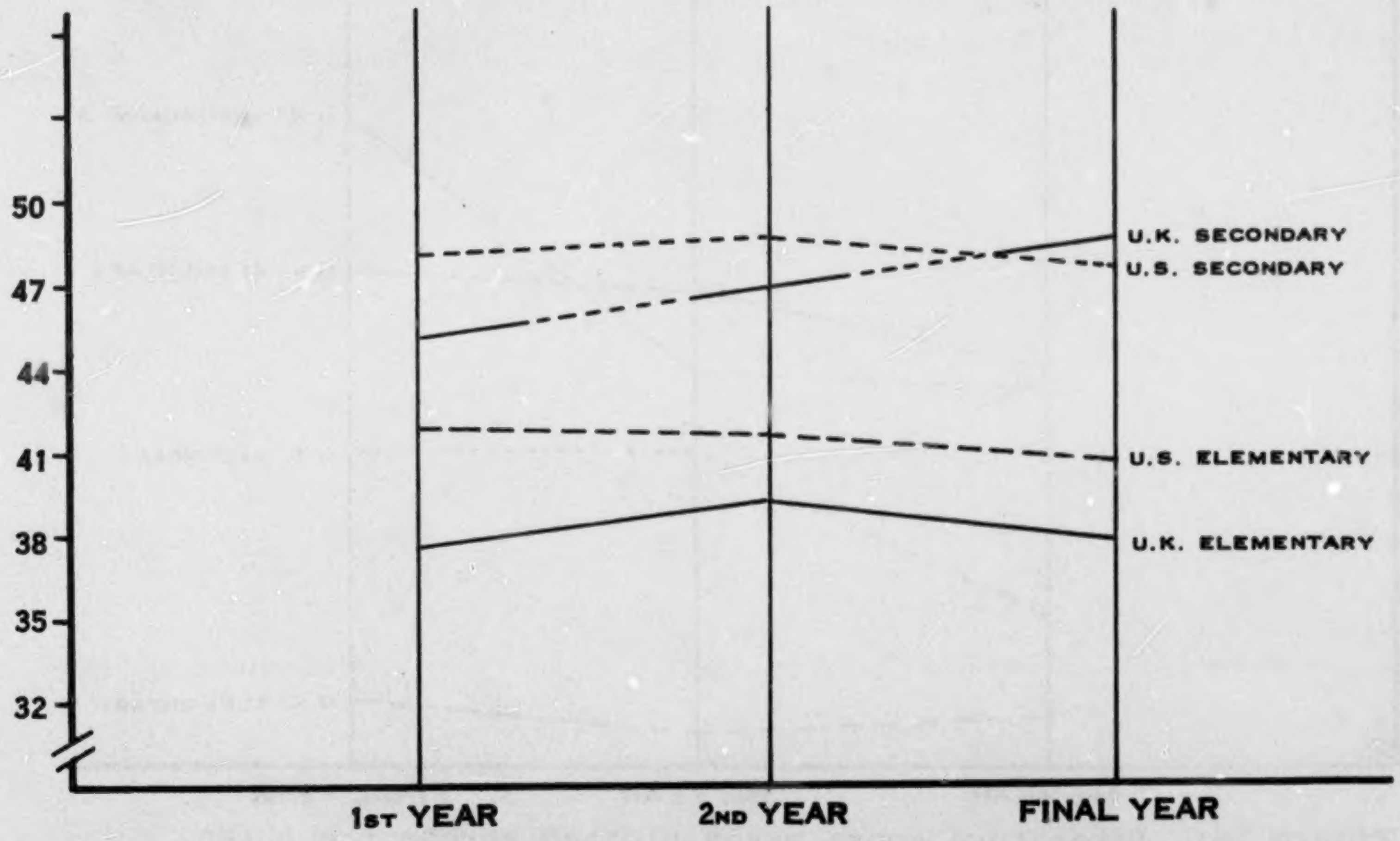

Figure 14. Total Natural Science score means plotted across the three years of training for elementary and secondary.

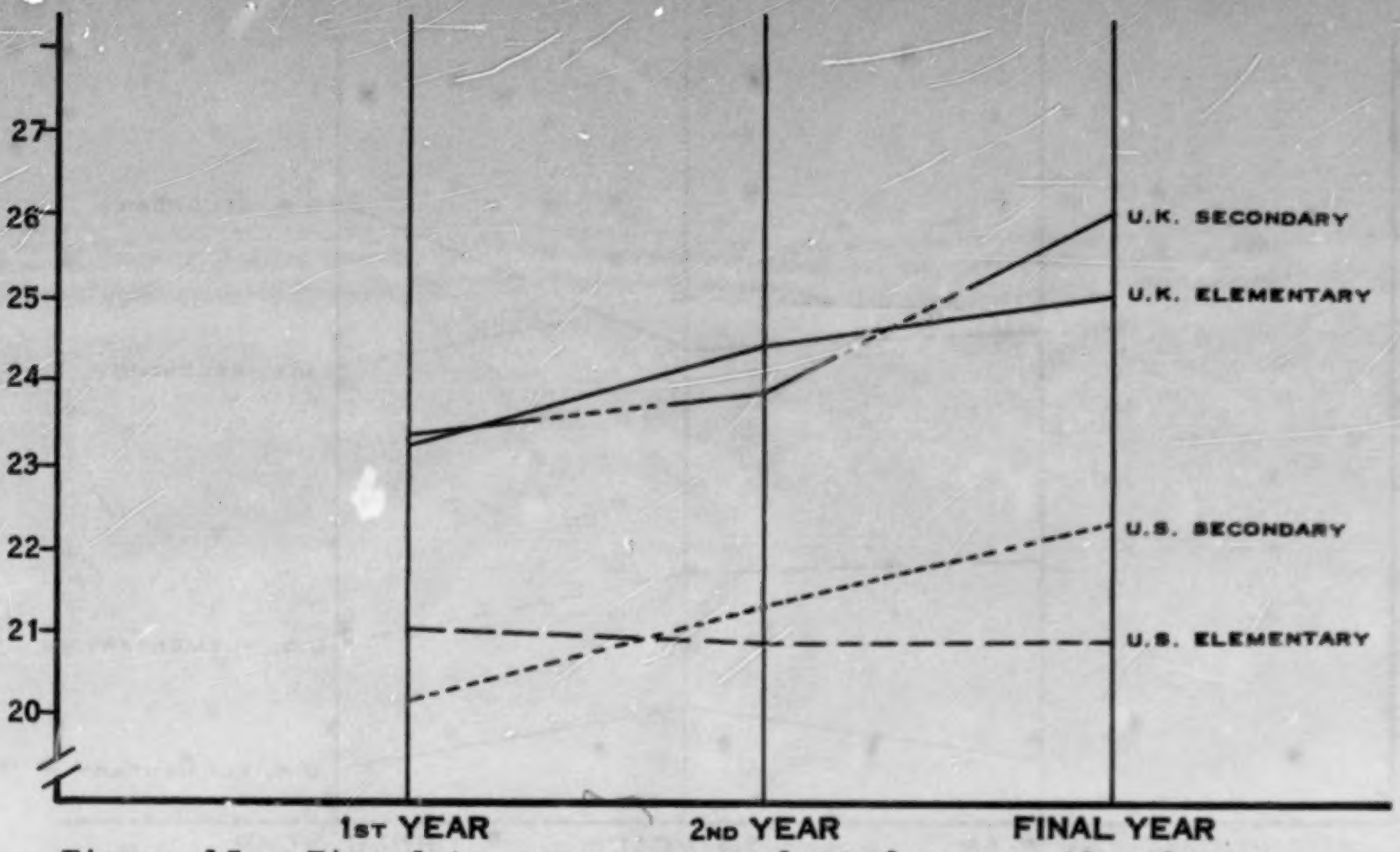

Figure 15. Fine Arts score means plotted across the three years of training for elementary and secondary.

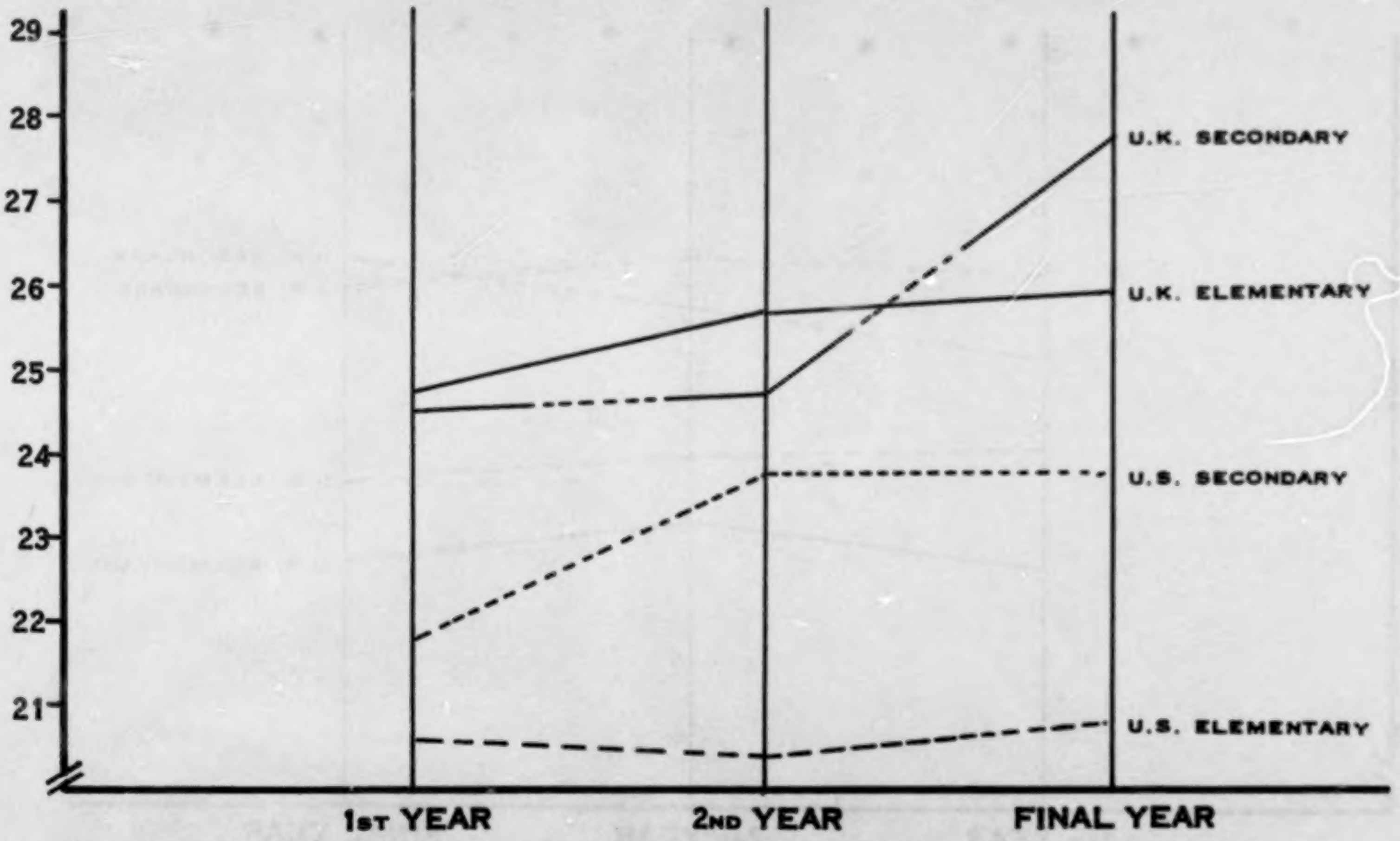

Figure 16. Literature score means plotted across the three years of training for elementary and secondary.

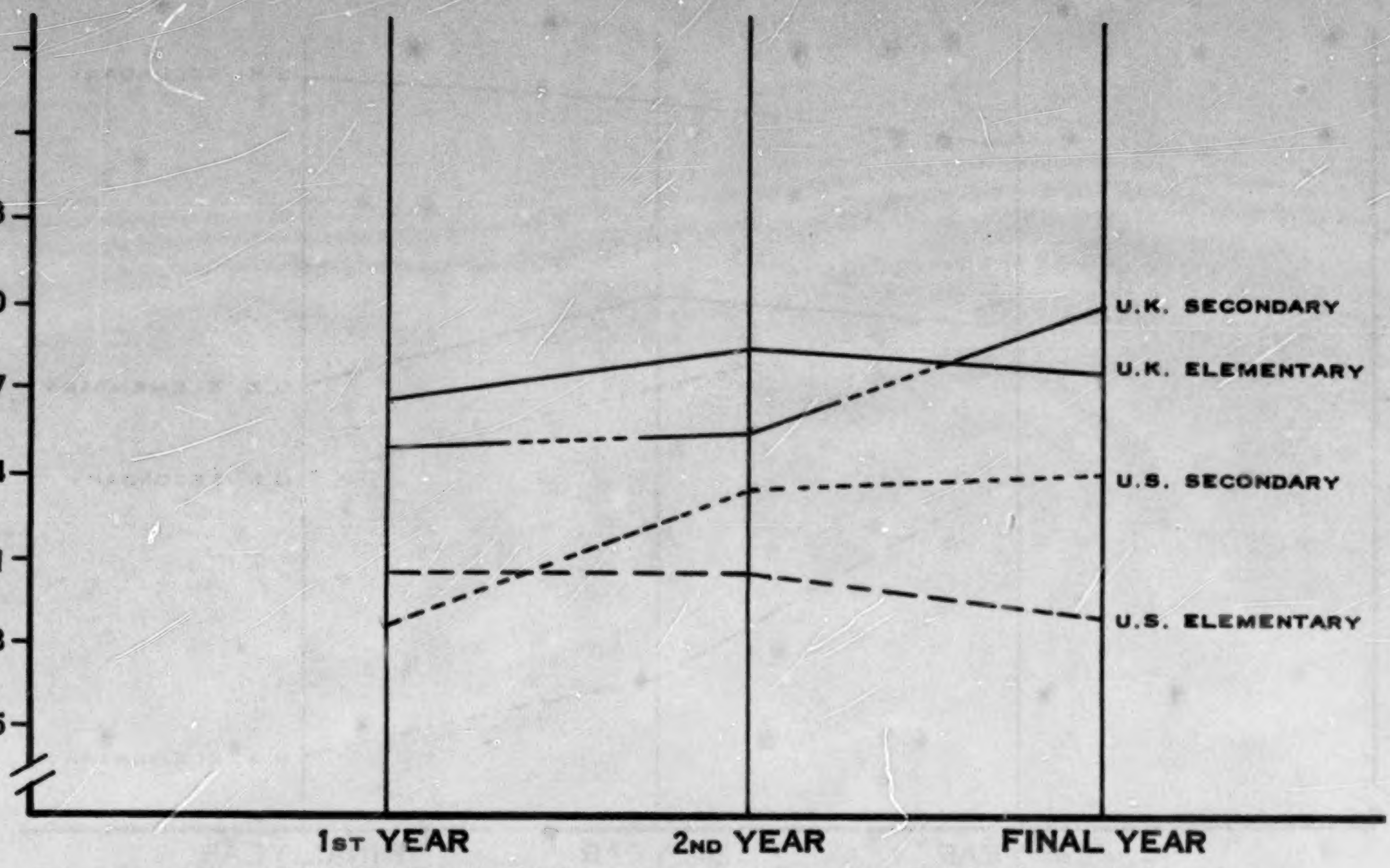

Figure 17. Total Humanities score means plotted across the three years of training for elementary and secondary.

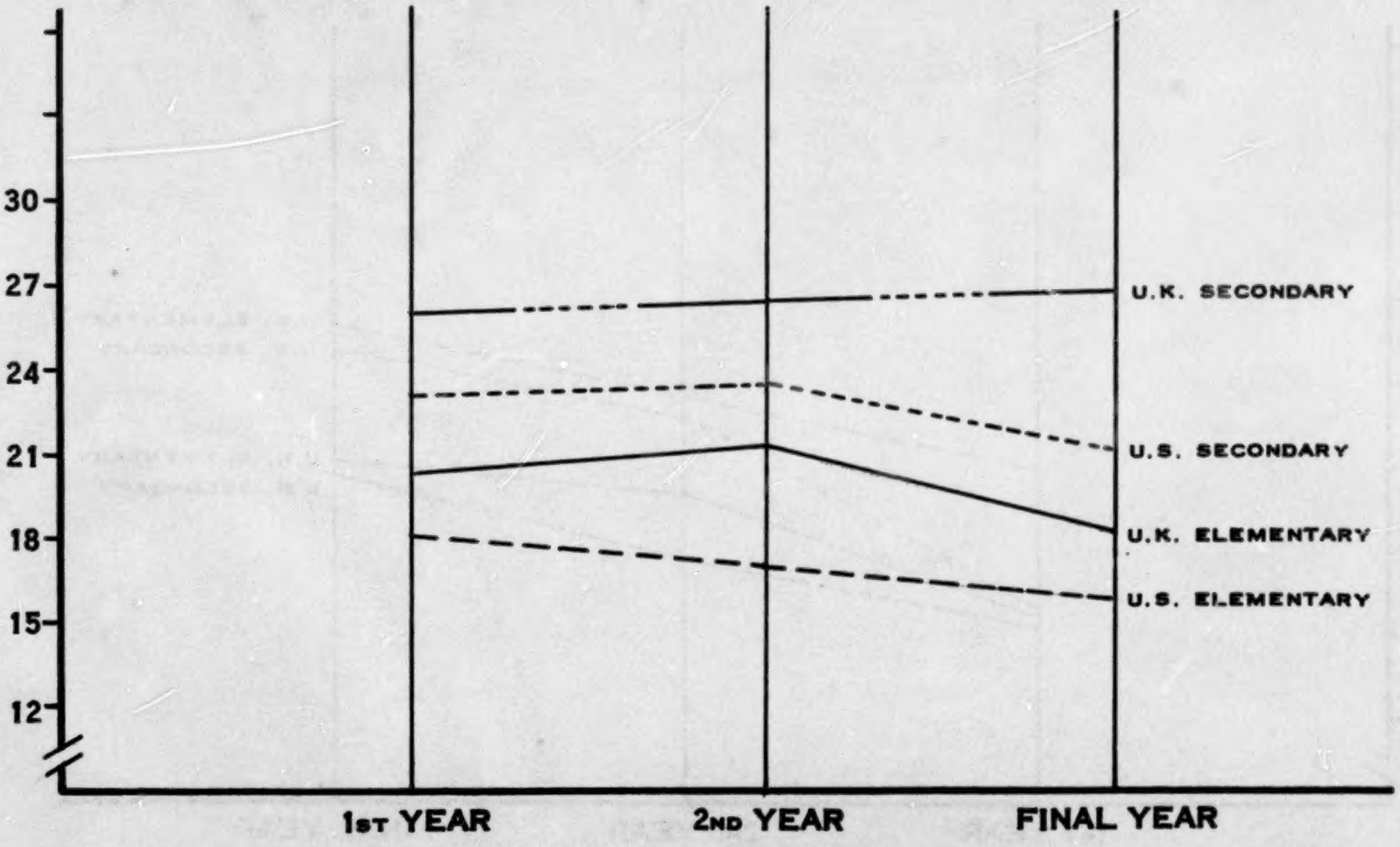

Figure 18. Mathematics score means plotted across the three years of training for elementary and secondary.

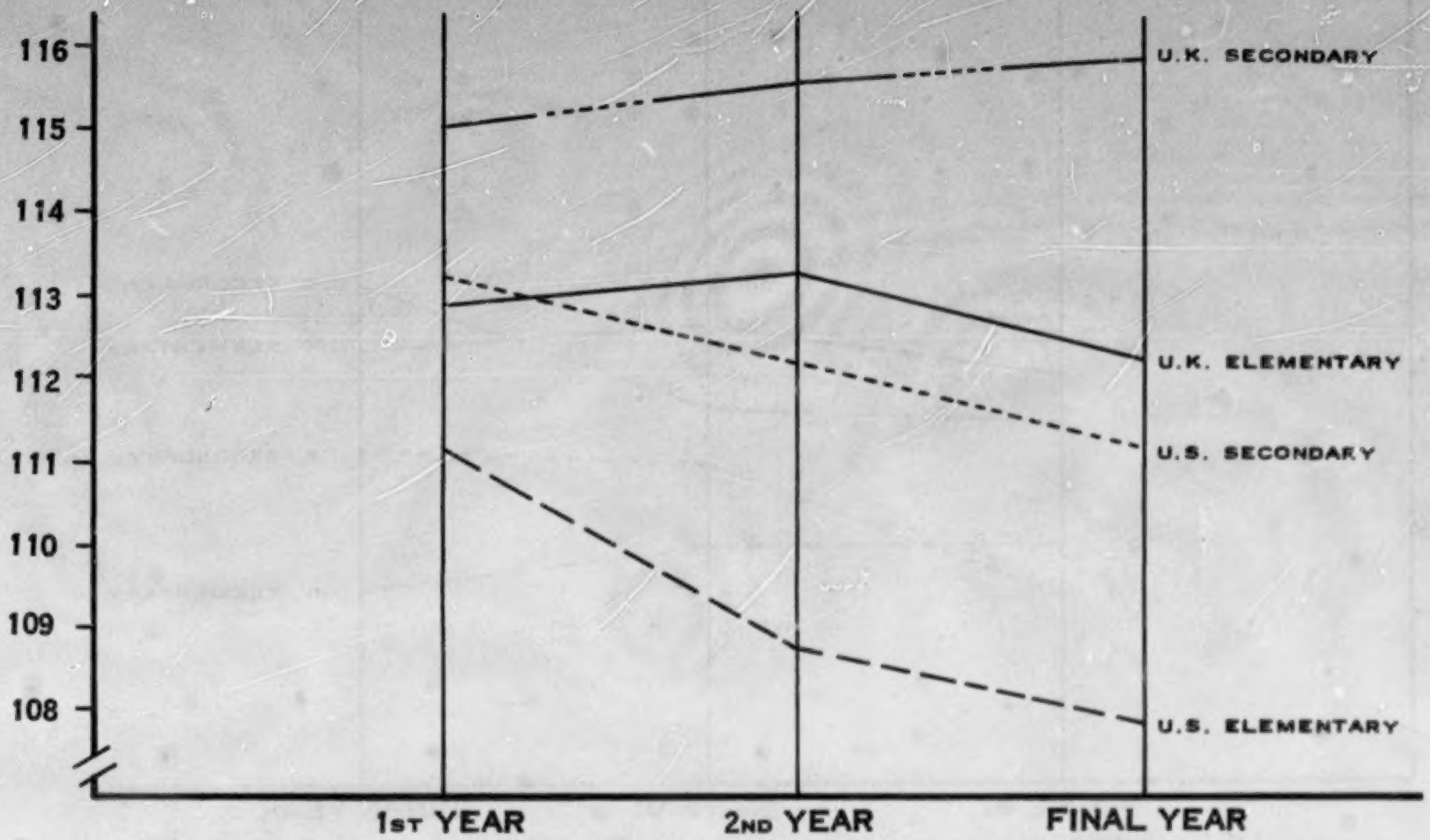

Figure 19. Catell Culture Fair Intelligence Test (IPAT) score means plotted across the three years of training for elementary and secondary.

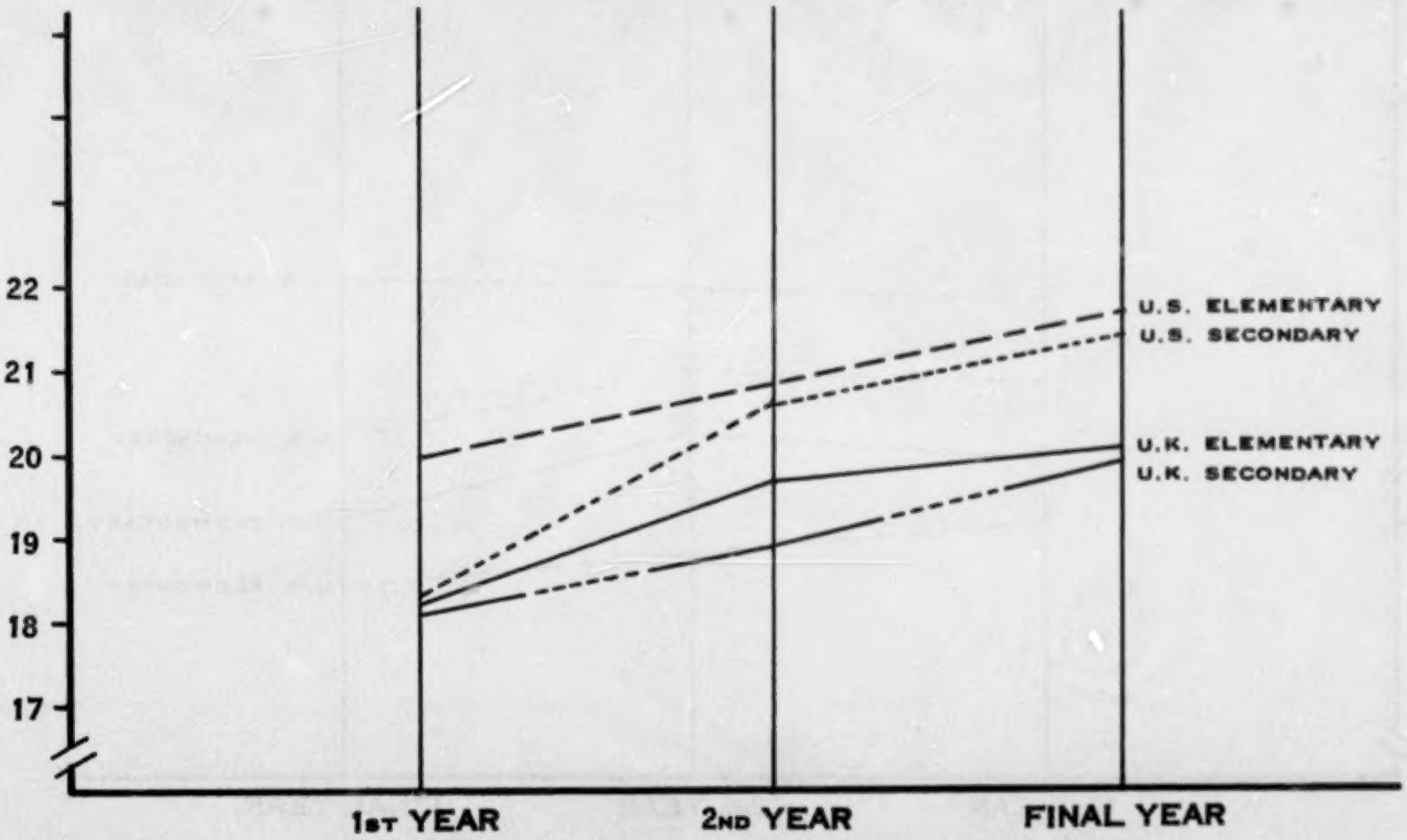

Figure 20. Child Development score means plotted across the three years of training for elementary and secondary.

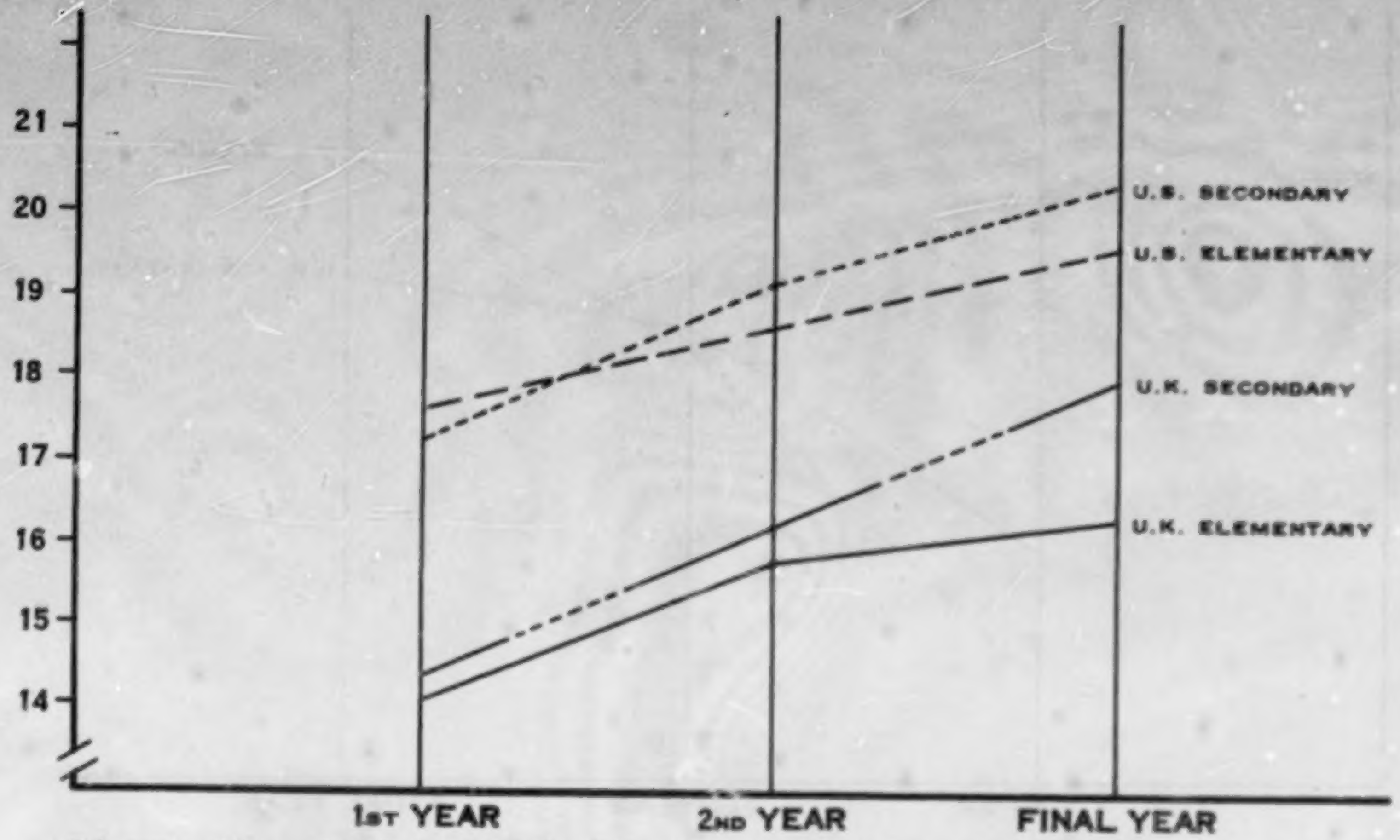

Figure 21. Guidance and Measurement score means plotted across the three years of training for elementary and secondary.

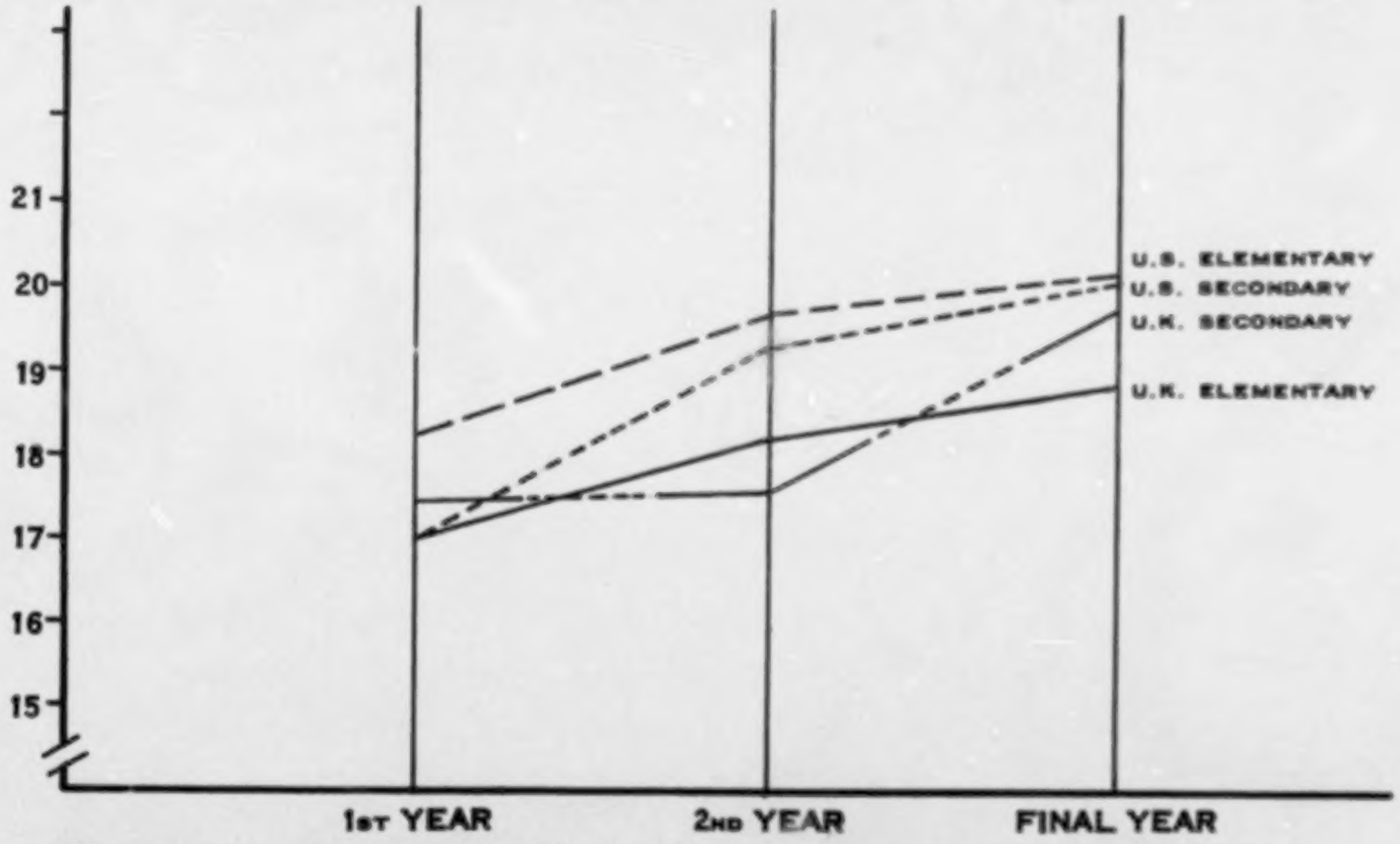

Figure 22. Instructional Methods score means plotted across the three years of training for elementary and secondary.

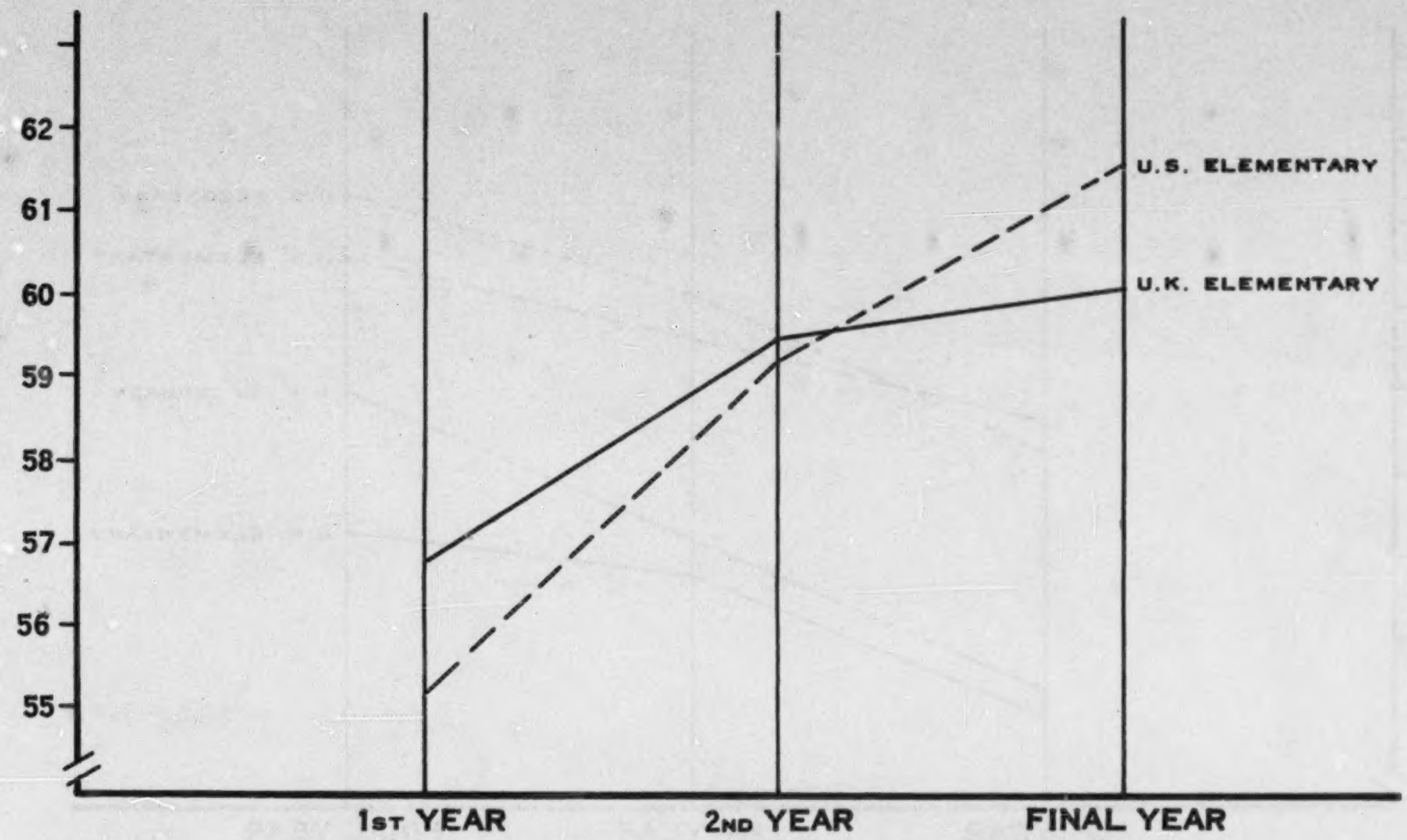

Figure 23. Elementary Education score means plotted across the three years of training for elementary.

TABLE 21

Mean Scores for Selected Strata on Ryans Characteristics Measures and Minnesota Teacher Attitude Inventory; Elementary Final Year

Measure		Strata		
		U.S. NCATE-Public	U.S. Non-NCATE-Private	England and Wales Training Colleges
Ryans	B Learning Centered	50.2	52.0	47.6
	I Verbal Understanding	63.6	58.0	64.7
	S Emotional Stability	54.7	53.4	53.2
	X Understanding; Friendly	54.7	52.3	54.0
	Y Responsible	51.4	50.2	51.8
	Z Stimulating; Imaginative	55.9	53.9	55.5
	R Opinion of Students	53.8	51.7	52.8
	R_1 Opinion of Classroom Procedures	53.3	52.3	53.2
	Q Opinion of Administrative Personnel	50.0	47.8	47.4
MTAI		40.1	11.5	33.2

TABLE 22

Mean Scores for Selected Strata on Academic Achievement Measures and Cattell Culture-Fair Intelligence Test (IPAT); Elementary Final Year

Measure	Strata		
	U.S. NCATE-Public	U.S. Non-NCATE-Private	England and Wales Training Colleges
English Composition	55.0	40.5	58.3
Biological Science	23.6	16.1	20.7
Physical Science	19.5	13.1	16.1
Total Natural Science	43.1	29.3	36.9
Fine Arts	22.2	15.6	25.3
Literature	21.8	14.5	25.9
Total Humanities	42.0	28.5	47.9
Mathematics	17.9	13.1	17.7
IPAT	110.4	96.4	112.1

TABLE 23

Mean Scores for Selected Strata on Ryans Teacher Characteristics Measures and Minnesota Teacher Attitude Inventory;
Secondary Final Year

Measures		Strata				
		U.S. NCATE-Public	U.S. Non-NCATE-Private	Scotland	England & Wales Train. Colleges	England & Wales Univ. Grads
Ryans	B Learning Centered	50.7	53.0	49.6	48.6	49.6
	I Verbal Understanding	64.5	58.7	67.6	65.4	66.5
	S Emotional Stability	54.9	55.1	53.3	54.8	54.4
	X Understanding; Friendly	52.5	50.2	51.3	52.3	52.2
	Y Responsibility	50.9	50.4	50.6	51.3	50.5
	Z Stimulating; Imaginative	55.1	53.9	54.3	54.9	54.2
	R Opinion of Students	50.9	50.1	49.8	51.8	51.4
	R_1 Opinion of Classroom Procedures	52.5	52.0	51.9	52.9	52.4
	Q' Opinion of Administrative Personnel	48.5	47.1	47.7	46.8	46.3
MTAI		25.6	9.2	8.0	23.0	21.4

TABLE 24

Mean Scores for Selected Strata on Academic Achievement Measures and Cattell Culture-Fair Intelligence Test (IPAT); Secondary Final Year

	Strata				
Measure	NCATE-Public	Non-NCATE-Private	Scotland	England & Wales Train. Colleges	England & Wales Univ. Grads
English Composition	56.5	45.4	73.0	59.8	67.1
Biological Science	27.1	19.4	26.3	25.1	24.1
Physical Science	22.6	17.3	25.4	21.6	24.7
Total Natural Science	49.8	36.7	51.7	46.8	48.9
Fine Arts	23.2	16.6	28.1	25.1	27.5
Literature	24.5	16.8	32.7	25.5	29.3
Total Humanities	45.4	32.5	57.3	47.6	53.0
Mathematics	23.3	15.3	29.7	25.1	27.4
IPAT	112.6	100.0	114.5	115.4	116.3

TABLE 25

Mean Scores for Selected Strata on Professional Knowledge Measures; Secondary Final Year

	Strata				
Measure	NCATE-Public	Non-NCATE-Private	Scotland	England & Wales Train. Colleges	England & Wales Univ. Grads
Child Development	21.7	17.3	21.2	19.6	19.8
Guidance and Measurement	20.7	16.2	20.2	17.0	17.8
Instructional Methods	20.8	17.3	20.7	19.0	20.1

TABLE 26

Mean Scores for Selected Strata on Professional Knowledge Measures; Elementary Final Year

Measure	Strata		
	NCATE-Public	Non-NCATE-Private	England & Wales Train. Colleges
Child Development	22.8	17.7	19.9
Guidance and Measurement	20.5	15.9	16.0
Instructional Methods	21.2	16.1	18.7
Elementary Education	64.7	47.6	59.9

Chapter V

SUMMARY OF REPORTS ON COLLEGE AND UNIVERSITY VISITS IN THE UNITED KINGDOM

One significant phase of this comparative study involved visits by project members to certain British institutions directly involved in the preparation of teachers. Similar visits were also paid to a sampling of the United States institutions participating in the study. Appendix B indicates the institutions visited in the United Kingdom. The visits to and information obtained from each college or university were based on a structured outline developed by the research team. This outline, called an Institutional Observational Record, appears in Appendix I. The contents of this and the following chapter are organized on the basis of this outline.

In England and Wales teachers are prepared in training colleges,[72] university departments of education and institutes of education, and university colleges. In Scotland professional training takes place in colleges of education and in three colleges for women. In Northern Ireland teachers are prepared in colleges of education and in the department of education of Queen's University. There is no institute of education in Northern Ireland. Charts 1, 2, and 3 indicate the general teacher education preparation patterns in the United Kingdom.

Scope and Limitations of Teacher Education Offerings and Services

Two basic types of programs are offered by the training colleges and

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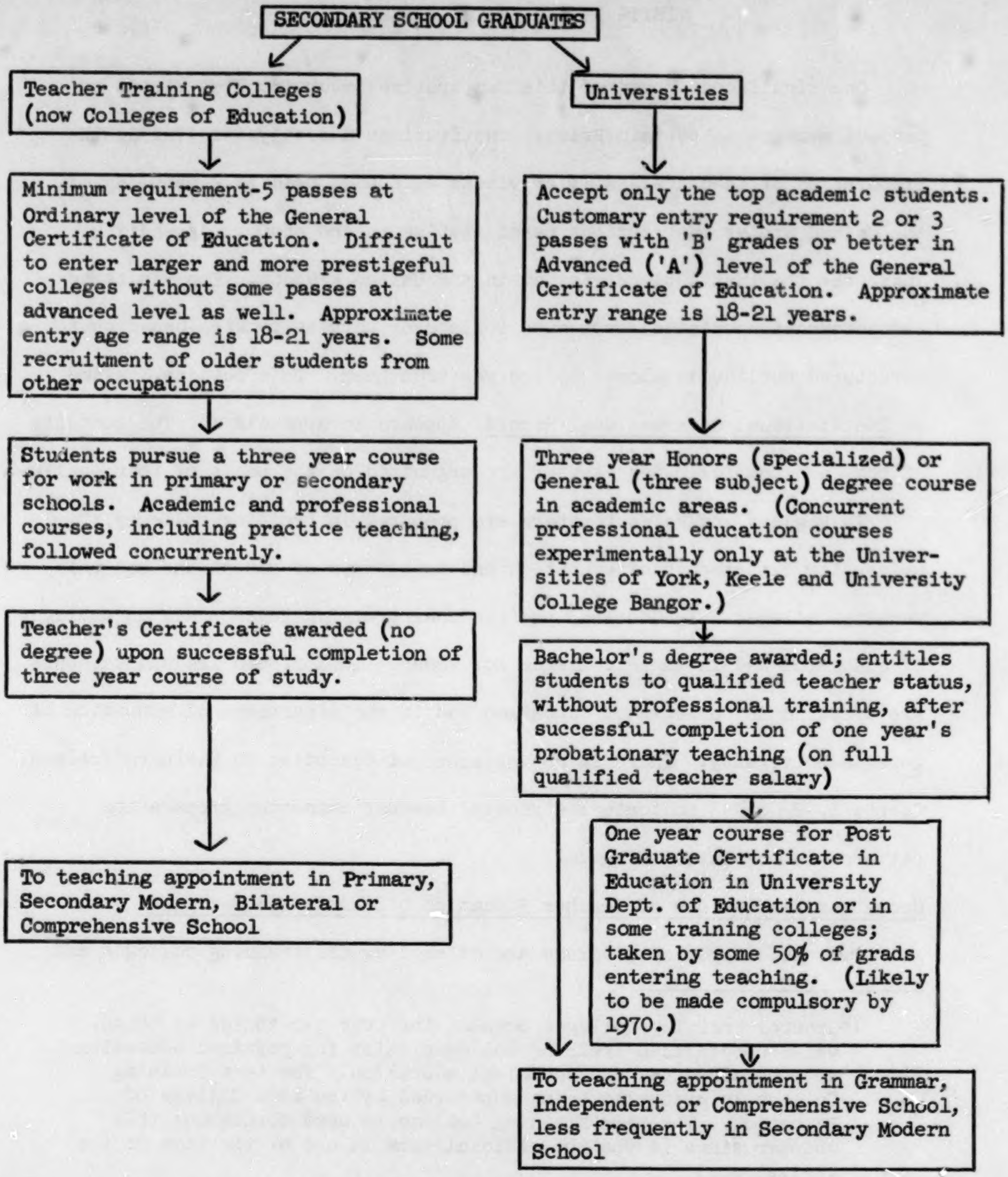
[72] General training colleges account for over two-thirds of these, while specialized training colleges exist for physical education, art, housecrafts, and technical education. The term Training College is gradually being superseded by the term College of Education. The term Training College is used throughout this chapter since it was the official term in use at the time of the visitations.

Chart 1

TEACHER EDUCATION PREPARATION PATTERNS IN ENGLAND AND WALES



SECONDARY SCHOOL GRADUATES

Teacher Training Colleges (now Colleges of Education)

Minimum requirement-5 passes at Ordinary level of the General Certificate of Education. Difficult to enter larger and more prestigeful colleges without some passes at advanced level as well. Approximate entry age range is 18-21 years. Some recruitment of older students from other occupations

Students pursue a three year course for work in primary or secondary schools. Academic and professional courses, including practice teaching, followed concurrently.

Teacher's Certificate awarded (no degree) upon successful completion of three year course of study.

To teaching appointment in Primary, Secondary Modern, Bilateral or Comprehensive School

Universities

Accept only the top academic students. Customary entry requirement 2 or 3 passes with 'B' grades or better in Advanced ('A') level of the General Certificate of Education. Approximate entry range is 18-21 years.

Three year Honors (specialized) or General (three subject) degree course in academic areas. (Concurrent professional education courses experimentally only at the Universities of York, Keele and University College Bangor.)

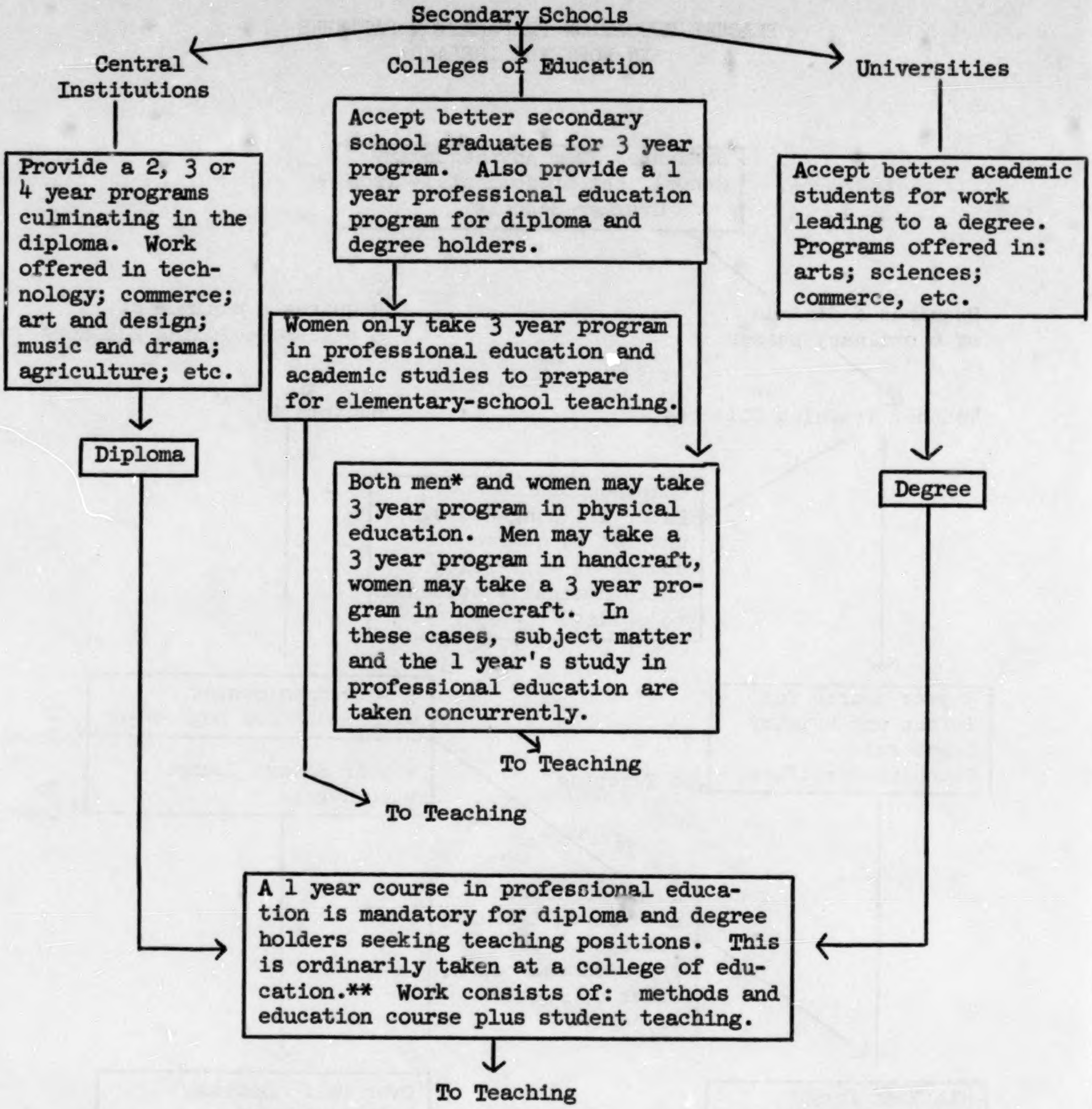
Bachelor's degree awarded; entitles students to qualified teacher status, without professional training, after successful completion of one year's probationary teaching (on full qualified teacher salary)

One year course for Post Graduate Certificate in Education in University Dept. of Education or in some training colleges; taken by some 50% of grads entering teaching. (Likely to be made compulsory by 1970.)

To teaching appointment in Grammar, Independent or Comprehensive School, less frequently in Secondary Modern School

Chart 2

TEACHER EDUCATION PREPARATION PATTERNS IN SCOTLAND

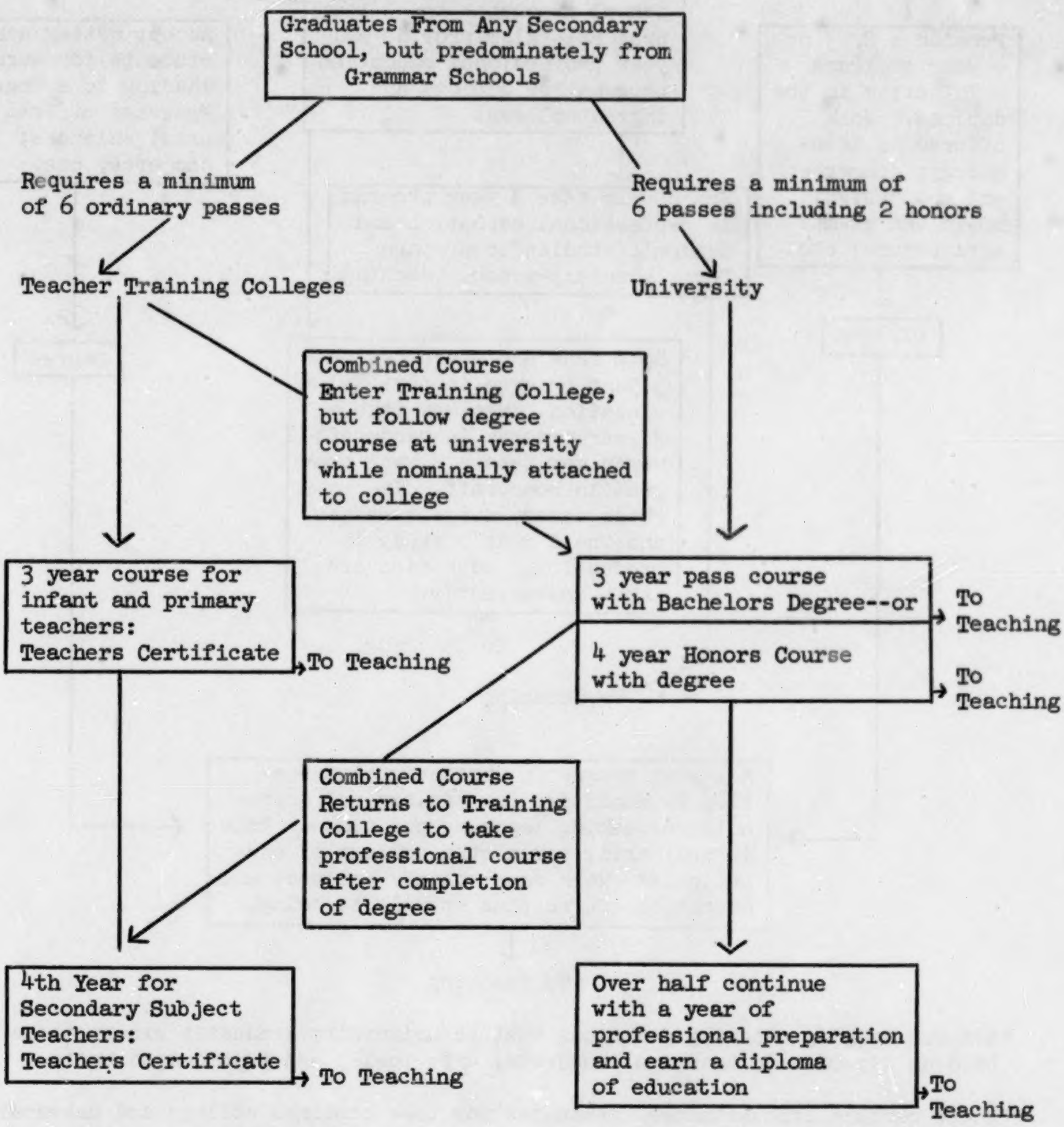

Secondary Schools
Central Institutions
Colleges of Education
Universities
Provide a 2, 3 or 4 year programs culminating in the diploma. Work offered in technology; commerce; art and design; music and drama; agriculture; etc.
Accept better secondary school graduates for 3 year program. Also provide a 1 year professional education program for diploma and degree holders.
Accept better academic students for work leading to a degree. Programs offered in: arts; sciences; commerce, etc.
Women only take 3 year program in professional education and academic studies to prepare for elementary-school teaching.
Diploma
Both men* and women may take 3 year program in physical education. Men may take a 3 year program in handcraft, women may take a 3 year program in homecraft. In these cases, subject matter and the 1 year's study in professional education are taken concurrently.
Degree
To Teaching
To Teaching
A 1 year course in professional education is mandatory for diploma and degree holders seeking teaching positions. This is ordinarily taken at a college of education.** Work consists of: methods and education course plus student teaching.
To Teaching

*All men seeking teaching positions must be university graduates except those holding diplomas in technical subjects; art; music; and physical education.

**Under certain circumstances, graduates may take combined college and university programs of study for the year of professional education leading to the University Diploma of Education.

Chart 3

TEACHER EDUCATION PREPARATION PATTERNS IN NORTHERN IRELAND


Graduates From Any Secondary School, but predominately from Grammar Schools
Requires a minimum of 6 ordinary passes
Requires a minimum of 6 passes including 2 honors
Teacher Training Colleges
University
Combined Course Enter Training College, but follow degree course at university while nominally attached to college
3 year course for infant and primary teachers: Teachers Certificate
To Teaching
3 year pass course with Bachelors Degree--or
To Teaching
4 year Honors Course with degree
To Teaching
Combined Course Returns to Training College to take professional course after completion of degree
4th Year for Secondary Subject Teachers: Teachers Certificate
To Teaching
Over half continue with a year of professional preparation and earn a diploma of education
To Teaching

the colleges of education. The first is a three-year post-secondary course leading to a Teachers Certificate in the English, Welsh, and Irish schools, and to a Diploma in the Scottish schools. Enrollments in this course in Scotland are for all practical purposes confined to women. By law Scottish men need a university degree followed by a year of professional education in a college of education. Since university study in England is the _sine_ _qua_ _non_ for teaching in the best secondary schools, it is widely looked upon as the best preparation for any type of secondary school teaching. On the primary (corresponds to elementary in the United States) school level approximately one-fourth of those being prepared are men.[73] Most of these, however, are at the junior-secondary or upper primary levels.

The second type of program is a one-year course of study for all graduates regardless of prior specialization who wish to prepare for teaching. Graduates in the arts and sciences (liberal arts) tend to predominate. This program exists at all the Scottish colleges of education and in some of those in England. It is the only program of a department of education in a liberal arts university. This one year of professional education is not yet compulsory in England, but increasingly men are

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[73] The enrollments in 1963 (the last year for which figures are precently available) were as follows:

General Colleges

(i.e., other than Housecrafts, Physical Education, Art, technical teachers)

Three-year General	
Men	13,574
Women	31,518
Two-year General (i.e., shortened course for mature students)	
Men	682
Women	1,018

(Source: _Statistics of Education 1963_, Part 2, H.M.S.O., London 1964) voluntarily undertaking the program. At present however about half the university graduates entering teaching do so without any professional preparation whatsoever. It is expected that the one-year course will be made compulsory within the next few years.

The colleges of education in Northern Ireland have a four-year course leading to a certificate for students preparing to teach in schools of the secondary-modern (or junior-secondary) type. This is not just the three-year course (as taken by students preparing for primary schools) with an additional fourth year, but a separate course. The end aim is to turn out secondary teachers who will teach general subjects primarily (i.e., English, mathematics, history and geography) but who will also have a limited specialization in one of the following: English with special reference to speech and drama, mathematics, science, physical education, art, crafts, religious education, and the education of slow learning children.[74]

Limitation of the functions of these institutions to teacher preparation is the result of the influential position of the liberal arts oriented universities which not only are the status schools in the eyes of the public, but sit atop the educational power structure.[75] The position of lower prestige is especially noticeable in the situation of the English training colleges, as is explained in greater detail elsewhere.[76]

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[74] In Northern Ireland, students with university degrees have several courses open to them.
  (1) If they wish to teach in primary schools (elementary schools-children age 5-11), they must come to a college of education for the one-year course in professional training.
  (2) If they wish to teach in secondary-modern schools, they may take a one-year course either at a college of education or in the university department of education.
  (3) If they wish to teach in grammar schools, they take the one-year course of professional training in the university department of education. This course is not as yet compulsory.

[75] Dr. William Taylor, University of Oxford, Department of Education, feels that the admittedly inferior position of the colleges of education is not the result of this factor, but the product of a complicated pattern of historical influences.

Ongoing research to improve teacher education is very common, although it appears of secondary importance. The nature of these projects varied widely, thereby indicating that (1) there is little inter-institutional coordination of research efforts, and (2) within any one institution research efforts are largely on an individual or small group basis, sometimes being done to meet requirements for the doctorate.[77] A significant segment of the research takes the form of experimentation, and here, too, is a wide variety in nature and scope, ranging from the college-wide experiment in general education at the University College of North Staffordshire, through the North Wales plan to teach education courses for the first time in the freshman year, to efforts with educational television at Dundee and the teaching of mathematics to children by two different methods at Notre Dame of Glasgow.

The experimentation is a factor contributing to the uniqueness of the institutions visited. Although, for example, English training colleges have much in common with one another, and the Scottish colleges of education can be placed in their own category, somewhat unique features were noticeable. Exeter's favorable staff-student ratio in the Department of Education was offered as partial explanation for the absence of the final examinations so common in British education. Rolle College considered itself slightly unique in that its girls were assigned to assist with children in private homes of Exmouth where the college is located. Bognor Regis could claim its 1-9 staff-student ratio and the resultant highly personal contact between faculty and students as indicative of its uniqueness.[78] To this could be added the college's Local Studies course which utilized community resources. Aberdeen's rural education program and Dundee's work with closed-circuit television were notable features of the Scottish institutions.

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[76] See page 147 and the discussion on Institutes of Education.

[77] Examples of the research projects noted are a study of the teaching of English as a second language in Welsh schools (University College of North Wales at Bangor), determining the effectiveness of techniques for selecting applicants for training schools (Sheffield Training College), testing incoming and outgoing students for changes in values (Notre Dame in Glasgow), and determining the length of time qualified females tend to remain in teaching (Nottingham-Training College).

The major problem of teacher preparation institutions in the United Kingdom appears to be pressure for expansion. The number of applicants increasingly tends to exceed the number of available places.[79] Rapid growth is likely to have adverse effects on a faculty-student ratio which compares most favorably with the situation in the United States. Such growth is being stimulated by, on the one hand, a demand for more trained teachers, and on the other hand by various concerns for an extended period of teacher preparation. The teacher education programs appear, thus far, to have been little affected by enrollment pressures, and evidence little change over the past decade except in the case of the English training colleges whose undergraduate program has been extended to three years. This appears consistent with the absence of any British tradition of mass education.

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[78] The staff-student ratio in English colleges of education is fairly uniform (i.e., about one to twelve overall) although nothing is officially laid down for the guidance of the Local Education Authorities and the voluntary bodies providing the colleges.

[79] "Places" is the British equivalent to the American phrase "size of enrollment."

The implementation of the Robbins Report calling for a four-year program for the most able twenty-five per cent of the students in place of the existing three-year diploma program for all would mean some changes and some new problems. If, for example, the degrees were to be given through the universities--a continuation of the current practice--the university departments of education would continue to maintain a control over teacher training programs that would restrict the autonomy of training colleges (in England and Wales) and colleges of education (in Scotland). Whereas both Britain and the United States appear to be moving in the direction of a quality education for a great quantity of students, they are doing so from opposite starting points. The British starting point is a quality education for the few, and a view of the school's function as that of constantly weeding out those of lesser talent. The values inherent in this British pratice bode well for the universities continuing their position of dominance, and give rise to the concern that education will suffer as it is made more widely available.[80] Another form taken by this concern is that bright students will not be adequately challenged, and this was indicated as a critical problem by staff at several of the institutions visited.

Values inherent in British society contribute to other problems, ones which are critical in a more subtle way. There is a higher prestige associated with teaching at the secondary school than at the primary school level. Given directives such as that calling for 85% of the places in training colleges to go to future primary school teachers,[81] many students preferring to teach at the secondary level but failing to find college places in the secondary program will enroll in primary education programs. Since this is where the places exist, there also are enrolled in programs preparing primary school teachers persons for whom this is the only opportunity for a government financed college education.

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[80] See, for example, the discussion by the eminent British historian A. L. Rowse in "English Education: A Reflection of English Society," Current History, (September 1958.)

One final problem emanating from the particular structure of British society and education is that of the adjustment which at first has to be made by many beginning teachers. The problem stems from the fact that these teachers are practically all grammar school graduates, but over 90% of them will teach in a different type of secondary school or in a primary school.

Objectives

The preparation of teachers is the dominant objective of British teacher training institutions. Such preparation has a two-fold basis: the need to increase the supply of available teachers, and the desire to improve academic standards or at least maintain them where they appear adequate. Although a written statement of broad aims was nonexistent at most institutions, that of the Sheffield Institute of Education would doubtless be widely acceptable.

> To coordinate and promote the training of teachers and others intending to engage in educational work and to encourage further study and research in education.[82]

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[81] This directive of October 1960 came at the inopportune time when the training colleges were making the change to a three year program for both the primary and secondary levels.

[82] The University of Sheffield Institute of Education, Handbook 1963, p. 1.

Statements made by various college personnel of the quality backgrounds of students would appear to indicate that high standards, rather than the availability of places (openings), is the overriding concern. Honors rather than a mere pass, advanced specialization in a few areas rather than an overall general education, the reserving of education courses in universities to a fourth or postgraduate year, and the granting not of a higher degree but of certification diplomas for this fourth year, are also indicative of an emphasis on the content areas. It seems reasonable to conclude, therefore, that with regard to universities, competence in the academic disciplines is a more important objective than effectiveness in the art of teaching. This does not reflect the prevailing ideology of training colleges themselves.

Specialization appears to be a prominent feature of British education, and the preparation of teachers is no exception to this generalization, each student emphasizing one or two content fields. Nevertheless, school personnel consistently gave negative replies to the question of whether objectives differed for the various aspects of the teacher education program. Although the Department of Education and Science in London (hereafter, as in British usage, referred to as the Government) through its deliberations and directives shows a tendency to emphasize the preparation of teachers in terms of their technical ability, actual stress is largely on academic rigor, probably because such is the condition of the status universities which are held up to the other schools as models.

The gap between the academic and pedagogical sides of teacher preparation tends, however, to be minimized by two conditions. First, colleges of education students pursue studies in academic areas concurrently with professional courses. Secondly, many professional educators in key supervisory and administrative positions have distinguished themselves in academic areas. There was little evidence of a "how to teach vs. what to teach" controversy, a situation largely explained by the general agreement that academic competence is basic.

Pedagogical aspects are by no means ignored, as is evident from a written guidepost which reads in part

> ... a training college course ... is concerned with the growth of the whole child and with the nature of the society in which he lives .... The course is concerned, too, with more than helping students to gain skill in the art of teaching; it is also concerned with the principles upon which the art is based.[83]

The above statement can be viewed, furthermore, as acceptable to the spokesmen for and leaders of English education, because it appeared in the official annual publication of the Association of Teachers in Colleges and Departments of Education, a highly influential organization which claims to speak for educators of teachers in England and Wales, and which has sufficient power to place persons on committees of the Department of Education and Science. It should be mentioned, however, that English education is and has been for several decades undergoing considerable development in many directions, and out of this growth have come many viewpoints, some of which would be incompatible with both this explicit statement and its implications. The Handbook, it should be added, is not a directive which teachers interpret literally and follow slavishly. Such mechanical procedure is foreign to the British temperament, a mental set marked by reasonableness and a practice of depending upon the individual and of "muddling through."

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[83] Association of Teachers in Colleges and Departments of Education, Handbook on Training for Teaching. (London: Methuen and Co., 1960), p. xi.

An example of what can be considered the typical British approach concerns a decision of the various English institutes of education in 1960 which provided that the training colleges were to limit enrollments of future secondary school teachers to 15% of total enrollment, the remaining 85% being for primary teachers. Similar reactions to this directive came from personnel at several training colleges. There was acknowledgement of the existence of the directive, admission that the school did not quite meet the imposed limitations, and the showing of limited concern for the problems which the directive might create. It could be inferred that the directive was interpreted as a guide toward which training colleges should move, rather than a limitation to which they must rigidly adhere. In Northern Ireland the colleges of education are under the Ministry of Education for Northern Ireland, not the Local Education Authorities. The supply of teachers for the various types of schools is regulated according to estimates of the future needs of the schools. The school building program at the secondary level is an important determining factor.

On the question as to which objective receives priority--the preparation of primary school teachers or of secondary school teachers--there are at work factors undermining the 1960 directive. In existence are forces favoring an emphasis on secondary education,[84] and an imbalance in teacher preparation in favor of primary education can hardly be viewed as compatible with a tremendous expansion of educational opportunity at the secondary level. This particular issue is a useful example of the seemingly contradictory objectives of an educational system and a society in the throes of fundamental change.

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[84] See Secondary Education for All - a New Drive, Command 604, H.M. Stationery Office, London, December 1958; and Ministry of Education, Central Advisory Council for Education (England), 15 - 18. Volume I, H.M. Stationery Office, London, 1959, commonly known as the Crowther Report.

Turning to the question of who formulates objectives, it becomes necessary to distinguish clearly between the Scottish colleges of education, the English training colleges, and university departments of education. The statement most appropriate to all institutions is that the individual instructor retains for himself the decision as to what direction his courses will take. The ability of an individual school, through the person of its administrative head, to formulate school-wide objectives seems relatively limited in the case of the English training colleges when compared with the situations in the university departments of education and the Scottish colleges of education.

The two factors limiting the power of the training college principals are on the one hand the financial control exerted by the Local Education Authorities who allocate funds received from local taxes and national grants to the training college (in contrast to the situation of the universities which receive grants directly from the national treasury), and on the other hand the institutes of education. Ostensibly these institutes were formed to coordinate the activities of the university, the training colleges, and the lower level schools in a given geographical area. Judging from the concern shown by training colleges with visits from their respective institutes, the institute of education although legally separated but ordinarily regionally mingled with departments of education is the one means by which the more academically respected university department of education can be an overseer of the teacher training colleges.[85]

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[85] Colleges under an L.E.A. have to be distinguished from the Voluntary (private) Colleges of Education in England. The latter receive 100% running costs and 75% capital costs in the form of direct grants from the central government, and thus usually have more autonomy than the L.E.A. colleges.

With regard to the Scottish schools, the administrative officers possess broad authority. Although each college has a Board of Governors composed in part of people selected by laymen, in part of educators elected by teachers, and in part by others, the concern of these boards appears to be with broad policy and finances. Final authority legally resides with the Secretary of State for Scotland, but for all practical purposes only the board has direct contact with a principal.

The Department of Education and Science for England and Wales has declared that professional training will soon be required of all primary and secondary school teachers. No date, however, has been set for putting this requirement into effect. Finally, while objectives at the level of school program may be subject to staff deliberation and recommendation, the college principal remains the decision-maker.

Organization and Administration

Central to any understanding of the organization and administration of teacher education programs in the United Kingdom is a recognition of the high degree of decentralization in education. As a result of this condition the head official of a college possesses great power and control over his institution. Teaching faculty, convened as an academic board, may meet, deliberate, and recommend, but the decisions are made by the principal (as he is called in the English training colleges and the Scottish colleges of education) or department professor (as he is called at the university education departments).

The chain of command in the Scottish colleges theoretically begins with the Board of Governors, a group whose broad membership is designed to provide a voice for numerous organizations such as the county education authority, the Association of County Councils in Scotland, the university with which the college has administrative relations, teachers in the area, a church, and neighboring colleges of education. The Secretary of State for Scotland is also represented on the board.[86] Generally speaking, the Board of Governors is responsible for major policy formulation within the framework laid down by the Scottish Education Department. The principal, as chief official in the school, is responsible for the execution of board policy. The chain of command descends to the vice-principal, who usually is delegated care of aspects of internal administration, and to the dean of women.

Most of the remaining staff members are organized into what are commonly called professional subjects groups.[87] Each group tends to have principal lecturers and several lecturers. One of the principal lecturers usually receives a special responsibility allowance as head of the department. On occasion an opening for a principal lecturer rather than a lecturer will be created to circumvent salary scale restrictions and put the college in a better competitive position for hiring and retaining outstanding teachers. A faculty board of studies composed of all teachers in the smaller colleges and an elected group in the larger schools acts as an advisory body to the principal.

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[86] The Governing Boards of Jordanhill College and Notre Dame College, both in Glasgow, can be examined as typical. The board for Notre Dame consists of five members selected by teachers of the South-Western Area and Inverness-shire, four selected by the Association of County Councils in Scotland, two each chosen by the Secretary of State for Scotland and the Scottish Hierarchy of the Roman Catholic Church, and one each chosen by the Education Authority of the County of the City of Glasgow, the Senate of the University of Glasgow, and the governing board of Jordanhill. The same pattern applies to Jordanhill except that the Church of Scotland is represented instead of the Roman Catholic Church, and there is a representative from the Notre Dame board.

[87] These groups are largely comparable to American subject matter departments and the various departments in American colleges of education.

The training colleges in England and Wales likewise have a governing body. This is composed of the Local Education Authority (L.E.A.) plus representatives of neighboring LEA's, county grammar schools, and the Faculty of Education of the university to whose institute of education the training college is joined.[88] The governing body has overall control of personnel and finances. Within each school the organizational structure resembles that of the Scottish colleges, being headed by a principal and a deputy principal who most likely rose to their positions from the teaching ranks. The staff composed of lecturers and part time lecturers follows at a lower tier, and is organized into departments composed of individual disciplines. Through the department head and an academic board, the activities of the various departments are coordinated. Department heads are appointed by the principal, the LEA also having a role in this matter. Policy deliberations in a small college tend to involve the entire staff, while in larger institutions an academic council assumes this responsibility.

Control of the academic affairs of training colleges is in the hands of the Institute of Education with which the training college is connected.

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[88] The particular circumstances of individual colleges may result in slight variations from this pattern. For example, the Governing Body of Rolle College, Exmouth consists of the nine member Devon County Education Committee, two representatives from Exeter University, four "Co-opted Members," and single representatives of the Exeter Education Committee, the Plymouth Education Committee, the Cornwall Education Committee, and the Exmouth Urban District Council. This can be compared with the equivalent group at Stranmillis College in Northern Ireland whose board is composed of the Local Education Authority, grammar and public school headmasters, representatives of the three major churches in Northern Ireland (Methodist, Presbyterian, and Church of Ireland), and the Senior Inspector of the Ministry of Education.

The institute possesses this power because it examines program syllabuses and students.[89]

In terms of organizational structure, university departments of education are also responsible to the appropriate institute of education. A department of education is usually headed by a professor, followed in order by senior lecturers, lecturers, and persons listed as lecturers for particular fields. Another pattern consists of a department head, one or two persons with the title of professor, and the remainder of the staff listed as lecturers. It would appear that within the institute of education the influence of each staff member of the university education department is greater than that of his counterpart in the training college. The University of Southampton Institute of Education, for example, includes on its important committee administering the teacher certification examination the entire university Department of Education, but only the principal and one other representative from each of the related training colleges.[90]

The printed brochures of institutions visited indicate that the term "administrative staff," in common British parlance, refers to secretarial and custodial personnel, and not as in the United States to the head officials of a college. British college head officials, in common with the regular teachers, are listed as staff, an arrangement largely explained by the fact that these officials have been selected from the ranks of the teaching faculty and have undergone the same education as received by that faculty. Thus, although the school head tends to have considerable power (with the possible exception of training college principals) British schools do not appear to experience that gap between the goals of administration and the goals of teaching which is so noticeable in American colleges and universities. The visits tended to reveal a commonalty of orientation among the teaching faculty and what in the United States would be known as the school administration. While such commonalty may have been the result of a closing of ranks in the face of visitors, the above stated factors contribute to the belief such similarity of viewpoint is genuine.

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[89] The training college also answers to the National Department of Education and Science which has responsibility for building construction, supplies funds through the LEA, and provides inspectors.

[90] Another interesting example is that of the University of Leicester which up until 1961 had a faculty of education and an Institute of Education existing as separate and distinct entities. These have now been merged, the justification being the desirability of consolidating the total professional education effort of the university.

Student Personnel Programs and Services

Students enrolled in British teacher education programs tend to have several characteristics in common with one another. Their socio-economic background is mainly that of the lower middle class and appears to be growing more so.[91] Almost all of them have had a grammar school preparation for college, a fact which may explain the uniformity of teaching practice despite the high degree of classroom autonomy possessed by the individual teacher. The students, furthermore, tend to be in a geographically heterogeneous group due to the small size of the British Isles, a condition which contributes to college attendance at a school in a part of the United Kingdom distant from one's home. There are the expected exceptions: Stranmillis in Belfast, Northern Ireland,[92] enrolls Irish students; Scottish teacher trainees enroll in the Scottish institutions; and London area schools tend to have a predominantly local enrollment.

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[91] See Appendix Two (B) to the Robbins Report, H.M.S.O., 1965. For an additional and earlier source of data see Jean Floud and W. Scott, "The Social Origins of Teachers in England and Wales," *Transactions of the Third World Congress of Sociology*, Volume VIII, (London, 1956), pp. 256-257.

Very few students will undertake work at more than one institution, for the practice of transferring from one school to another is frowned upon, and so few are the actual cases that faculty can often cite the specific examples from memory. Early college entrance also is discouraged. Scottish legislation has established the minimum age as seventeen, and this figure rises to eighteen in the case of the English training colleges.

Almost all students receive financial assistance to cover expenses such as for tuition, maintenance, personal needs, required travel, and possibly income. Such complete coverage represents the maximum rather than the sole type of assistance. Aid is on a sliding scale depending on family income, and only those of the wealthiest backgrounds get no financial aid. Grants in English training colleges are paid by the L.E.A.'s. Educational authorities in Scotland award Bursaries to students in Scottish institutions, and supplement awards won by Scottish students in English institutions.

Although some of the colleges enroll either men (De La Salle College and St. Mark and St. John College) or women (St. Katharine's College and Rolle College), the majority are co-educational. In most of the latter women outnumber men two or three to one, a condition explained by the predominance of women in the primary teacher programs. A desire of some educators to reverse this figure appears largely unimplemented. Because men are oriented to secondary school teaching, and therefore seek a university degree (required in Scotland), they outnumber the women in the one year professional education program of the universities.

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[92] In recent years a small number of students from England and Wales has been trained at Stranmillis by arrangement with the English Clearing House.

Active recruiting of students is for all practical purposes nonexistent.[93] Admission to the English training colleges operates through a central clearing house to which secondary school graduates with their General Certificate of Education have applied. The universities tend to take their students from the very highest status secondary schools.

With reference to admissions standards and qualifications, it appears that the British regard high academic achievement as the best indication of likely success in teaching.[94] To the extent that they accept only students with records of outstanding achievement at the secondary school level, college and university officials appear little concerned with the possibility these students might not make the grade. A secondary school record of passes in five subjects at the Ordinary (O) level puts an applicant in a relatively unfavorable competitive position. Passes at the Advanced (A) level in at least two subjects were a stated prerequisite at several schools. Graduates of a three year liberal arts undergraduate program desirous of taking a fourth year in a university department of education need a record of first or second honors in most instances.

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[93] The British equivalent of the American pressure to recruit may be the pressure felt by secondary grammar school headmasters to court the favor of university officials in order to get their students admitted to particular universities.

[94] The occasional exception in actual practice can be found. Each year at Stranmillis intending freshmen students are interviewed in an attempt to determine their suitability for teaching. A small number with outstanding academic records have been rejected for deficiencies in other areas.

Screening after initial admission tends to be informal and limited mainly to a consideration of academic achievement. Written examinations at the end of a year's work are absent from almost all but the largest institutions where it becomes extremely difficult for instructors to know individual students well. Evaluation usually takes place at staff meetings. Faculty members at some institutions keep records on students in the form of a series of comments or grade for practice teaching, but these are not regularly reported in writing to students. At Stranmillis College in Northern Ireland grades are regularly reported to students both for academic subjects and for practice teaching by their tutors who have the responsibility for seeing that students in difficulty receive adequate help. In general where high demands for admission are found, concern about retention is largely non-existent. Students with outstanding grammar school records, and those who have proven themselves by graduating with honors from a university program (with content specialization) are not thought of as needing regular testing and a grade report.

While the specific procedures involved in evaluation will vary among colleges, students completing their three year program at the English and Welsh training colleges take both internal and external examinations, the former being developed by college faculty and the latter by outside inspectors. The external examiners are appointed by the institute of education to which the particular training college is attached. They are likely to be members of the education department of the associated university, but, with a view to maintenance of consistency and some degree of national uniformity, they may be selected from a neighboring institute. A few institutions have substituted a process of continuous assessment for a final examination. At Leicester a final assessment meeting (review of internal grades, etc.) with external examiners has replaced the formal external, terminal examination.

Formal guidance programs with trained counselors are foreign to the British educational scene. What guidance exists is administered informally by a tutor meeting with a small group of his students.[95] A few counseling offices do exist, such as at Rolle College in Exmouth, but they are a distinct exception and appear to have little effect on the usual tutorial arrangement. At some English training colleges the students select their two major content fields at the end of their first term, and the age levels for which they wish to prepare to teach at the conclusion of the second term. In other colleges the subject specialties are chosen before entry.[96] Faculty aid in making intelligent decisions in these matters tends to be forthcoming only to the extent that the student deliberately seeks out such aid.

Confidential records on individuals are maintained by their tutors. Such records usually include the student's application, interview reports, statements on scholastic achievement and field experiences, photographs, information on family background, and reports by the tutor. Some training college principals regularly review these records,[97] but faculty review at staff meetings appears as the more common practice.

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[95] A few institutions, of which Homerton Training College is one, provide students with an academic tutor and a "moral" tutor.

[96] As an example of the options available to students, at Stranmillis College the choice is between (1) a three year course to prepare for the teaching of young children aged 5-8, with the possibility in the second year of this course being selected for nursery school work (children aged 3-5); (2) a three year course to prepare for teaching children aged 7-11; and (3) a four year course to prepare for teaching in secondary-modern schools (children aged 11-15).

Maintaining records in the form of a job placement file is not very common although such a practice was found at Stranmillis and at Swansea. With regard to job information some data are provided students, but they themselves must take the lead in applying for positions. Some colleges make arrangements for job interviews on campus, while others will make confidential records available to a potential employing L.E.A. It does happen that headmasters will try to retain the services of a good practice teacher.

The issue of certification of teachers clearly indicates the subordinate status of the English training colleges, for the certificate is awarded, not by the college, but by the university with which the particular institute of education is connected. It is worthy of note that teacher education programs, be they one or three years in length, do not lead to a degree (as is the case with the liberal arts university), but only to a certificate. Conditions prevailing at the Scottish colleges of education are very similar. Degrees are awarded only by universities and only to persons with an academic major taken at the university. Teacher trainees from Scottish universities receive a certificate upon completion of the one year program taken subsequent to receiving a university degree. Persons qualifying to teach technical subjects and the arts of music, speech, and drama also receive a diploma.

The status students in teacher preparation appear to be those headed for the status schools, viz., the "Public" schools and the more prestigious grammar schools which regularly gain places in the status universities for their students. Almost without exception, those preparing to teach in these status schools do their work in university departments of education. At the various training colleges status seems to gravitate to those students enrolled in the program for which that institution is most noted.

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[97] This is the practice, for example, at the City of Leicester Training College.

Faculty

Nearly all faculty in professional education bring a university degree (75% of the men and nearly 50% of the women faculty have degrees) or college diploma and primary or secondary school teaching experience to their college or university posts. Those few lacking these qualifications are likely to be persons whose talents are in high demand, e.g., persons fluent in Russian, and who may have teaching assignments in several schools. Several persons lacking classroom experience can be found in university departments of education.[98] Generally speaking, the requirement of teaching experience is the point at which the qualifications required of faculty preparing teachers differ from those of faculty outside of professional education.

The master's degree is the predominant final degree earned by university education department faculty. This fact is, however, of far less significance than in the United States because, in common British practice, the bulk of post-bachelor's degree work is at the master's level. A year of research added to the master's work would meet doctoral requirements in many universities. While there appears to be little pressure to limit employment to persons with the doctorate, an interesting trend is the placing by younger faculty members of greater emphasis on the doctor's degree. Thus, for example, at the University of Southampton the doctorates are among the lecturers while the older professors have none.[99]

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[98] William Taylor. "The University Teacher of Education," Comparative Education, 1:3, (June 1965) Taylor sets this figure at 10%.

That doctorates are the exception rather than the rule becomes evident with a few examples. Of the 87 persons listed in the 1964-65 Prospectus as on the staff of Aberdeen College of Education, only six held a doctor's degree. Comparable statistics for Dundee revealed only three out of 36 to be recipients of the doctorate.[100] The Professor and two of the three Senior Lecturers of the Department of Education, University of Exeter held the doctorate, but none of the right Lecturers did.[101] In the Department of Education, University of Bangor only two of thirteen staff members held a doctorate. Four per cent of the Jordanhill faculty possessed the doctor's degree.

It should be noted that it is foreign to British practice to have persons for particular jobs, e.g., administrators, receive a separate training. The British counterpart of an administrator in an American institution is likely to think of himself as a head teacher and to pride himself on his office library.

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[99] In several instances at Jordanhill lecturers with the doctorate work under principal lecturers without the degree. When the head of Jordanhill's largest department sought to return to school for a doctorate, the university refused him admittance because "he had already written too widely."

[100] Due to the possibility of non-equivalence of degrees, excluded from the Dundee data are five persons with the D. A. degree in Arts and Crafts, and three with the D. P. E. in Physical Education.

[101] Comparable conditions exist in the institutes as exemplified by the Exeter Institute of Education where the Director and one of the Lecturers hold the doctorate, but the other Lecturer, the two Staff Tutors, and the principals of the two associated training colleges do not.

Training college faculty commonly carry the title of Lecturer. At a higher level are the Senior Lecturer and the Principal Lecturer. The various Professional Subjects Groups, to use the Scottish terminology, are headed by a Principal Lecturer. Departmental chairman in the universities have the title of Professor instead of Principal Lecturer. Below the Professor the most common ranks are Senior Lecturer and Lecturer. National salary scales exist, the ones for training colleges tending to be lower than those for the universities. In these training colleges approximately £200 separates the base salary for principal lecturers from that of senior lecturers at the next lower rank. The former receive annual increments of £50 in contrast to £35 increments for the senior lecturers. The smallest increments are received by the lecturers. An interesting aspect is that not only are salaries determined on a *national basis by a national committee*,[102] but quotas on the number of persons at *each school who can hold* each specific rank, hence be entitled to a specific

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[102] The "nations" as referred to here are (1) England and Wales, (2) Scotland, and (3) Northern Ireland. Salaries for the first are determined by the Pelham Scale which for 1963 established the following rates:

Principal Lecturer	£2191.-2491.
Senior Lecturer	£1864.-2191.
Lecturer	£1318.-1864

The salary scales prescribed by the Secretary of State for Scotland effective as of March 1964 were:

Principal Lecturer	£2100.-2770.
Senior Lecturer	£1705.-2645.
Lecturer	£1420.-2390.

The listed range gives the extremes; the actual range for each institution is somewhat less. In colleges of education in Northern Ireland the salary structure is based on the English Pelham Scale though each time the salary scale is revised in England (generally every three years) a committee established by the Ministry of Education in Northern Ireland has to approve a similar revision. Representatives of college faculty negotiate with the committee.

salary, are determined in the same manner.[103] The quotas, for example, permit up to 25% of a staff to be composed of principal lecturers, but the actual figure may be far less.

The teaching loads of faculty members varies between fourteen and twenty hours per week, with seventeen being the most common. At some universities the load is reduced to provide time for research and scholarly production.[104] Credit toward the teaching load is usually given for supervision of student teachers. Faculty at Stranmillis, for example, receive one hour credit for each student teacher on a seventeen hour teaching load.[105] Teaching assignments reveal a firm commitment to specialization. Usually this is specialization by subject matter, but on occasion it may be by age level, i.e., primary or junior-secondary. Where the staff, however, is numerically small, specialization tends to be absent except in the minority of cases.

Teaching methods reveal both traditional and modern aspects. Lectures, seminars, and tutorials represent the usual patterns of course organization. Seminars are more content structured than tutorials, the latter being organized in terms of individual student needs. Written work may be required in seminars and tutorials, both of which often follow lectures.

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[103] The limitations imposed by the scales do not prevent competition among institutions for particular persons, and institutions unable to compete favorably because of status considerations may seek to compensate for their inferiority by creating an opening at a higher rank in order to be able to offer a high salary.

[104] For figures regarding time spent on research see the report of a survey carried out by William Taylor and Michael Young in the latter's Innovation and Research in Education. (London: Routledge, 1965).

[105] Common practice in determining load credit for supervision involves considering the student teacher's load rather than, as in the United States, the supervisor's load.

Students who are going to miss a seminar or tutorial are expected out of courtesy to so inform the instructor. Attendance at lectures on the other hand usually is not required, though this practice varies. The traditional lecture course is uncommon at some institutions while predominating in others.

The English training colleges appear to consider their methods relatively more modern than those found at the universities, citing field trips in courses such as geography and field work as justification. Field work involves on-the-spot study of the community, as exemplified by the study of community records in the appropriate public office. The teaching of skills by means of practical application was seen in rural education with greenhouses and gardens, art, industrial arts, needlework, mathematics projects, and theater arts, to cite a few examples. Facilities for such activities were generally adequate at the institutions visited. Audio-visual materials such as films, tape recorders, and television were widely available, although the amount of use they received varied widely.

Several uncommon media and methods are worthy of note. Digby Stuart College has a small zoo of common animals for use in science classes and practice teaching. Also at this institution the student council has a voice in suggesting modification of subject offerings. At Gipsy Hill College, Kingston, systematic correlation of courses between faculty members existed in order to minimize segmentation of course work. A team teaching arrangement wherein responsibility for lectures and seminars is divided among departmental members is employed at Swansea Training College.

Full time teaching is the usual procedure in British teacher education institutions. Where part-time teaching exists the person so engaged is likely to be teaching elsewhere as well, hence he is a full-time teacher, though not at one place. Areas with part-time teachers are most likely to be foreign languages, music, and physical education. Faculty in university departments of education often hold posts in an institute of education, serving therefore in two positions at the same time. In rare instances resource persons who serve without pay, lecturing at erratic intervals, are listed as faculty members. It is unlikely that part-time faculty ever number much more than ten per cent of the total faculty.

The number of faculty engaged in teacher preparation is increasing as a result of growing pressure for enrollment. Rolle College in Exmouth, for example, experienced a thirteen per cent increase in staff size from 1963 to 1964. No particular type of post-secondary education can be considered common to these new staff members at Rolle, some coming from a training college background and some from a university program supplemented by the year of professional education.[106] Universities, on the other hand, can be expected to draw new staff from university graduates. This latter condition hints at the problem of equalizing opportunity in teaching, viz., the type of school in which one is educated is likely to be the type of school in which one will teach.

The time devoted to research is, as might be expected, greater in the universities than in the training colleges. Training colleges in England have no formal research function, and there are seldom institutional facilities available for this purpose. The whole question of research in the colleges is currently under discussion by a committee of the Association of Teachers of Colleges and Departments of Education. Individual faculty members in the training colleges were engaged in research, but their schedules allowed little time for such activities, and the undergraduate orientation of their institutions precluded the availability of graduate students who could do some of the work. Part-time research is quite common, but usually connected with work by the faculty member toward an advanced degree. Given the increasing attention by younger faculty to advanced degrees and the limited commitments to summer school work, the amount of research being done is likely to increase.

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[106] The problem which Rolle College has experienced and which, in varying degrees exists at several training colleges, especially the ones for women, is that of finding enough qualified women teachers to preserve a balance between men and women faculty members.

Curricula for Teacher Education

Since training colleges and university departments of education in the United Kingdom are single-purpose institutions, and since the British tend to shy away from detailed statements of objectives, little distinction is revealed between institutional objectives and objectives for one part of a school's program. Furthermore, since British education is content oriented (instead of learner or culture oriented) at most grade levels, and since the basic distinction between teachers is that between grammar school teachers--who are far less likely to take professional education course work--and all others, therefore distinctions between primary teacher education and secondary teacher education tend to be relatively minor and limited to differing content emphases. Within individual schools, however, these differences become even less significant when it is recognized that university departments of education are unlikely to be preparing many primary school teachers, and training colleges are unlikely to be preparing many grammar (secondary) school teachers. Two other factors might possibly exert similar influences. The first is the fact that practically all teacher trainees have had a sound grammar school background. The second is the fact that the program for primary school teachers in the training college is subject to close supervision by the more secondary school oriented department of education of a university by way of the institute of education.

Nevertheless, programs for the education of primary school teachers tend to demonstrate less predilection for content emphasis than do the secondary programs.

This is particularly true of programs designed to prepare teachers in early childhood education. Thus, the person preparing to teach 3-7 year olds in British schools typically finds he is learning a decidedly child centered approach. This matches the nature of early childhood education in those schools, which has tended to be child centered in the best John Dewey tradition since the conclusion of World War II.[107] Preparation of teachers for later childhood education, however, becomes increasingly, though not exclusively, subject matter based. Again, this corresponds to the nature of the schools inasmuch as the curriculum for older children is heavily weighted with subject matter in order to help them qualify academically for desirable secondary school placement. Interestingly enough, some British educators believe that elementary teacher preparation in the United States is still child centered, having yet to learn of the pervasive trend toward subject matter emphasis which has characterized elementary education programs in this country since "Sputnik." As evidence of this belief on the part of British educators, the American visitor may be asked repeatedly whether this or that child centered practice is "like they do it in the U.S.A."

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[107] An opinion also of Daniel McNeill, Stranmillis College, Belfast, Northern Ireland.

The basic features of teacher education curricula are determined by the teacher licensing agency of the government and, in England and Wales, the area institutes of education. The governmental agency in England and Wales is the Department of Education and Science (English Ministry), in Scotland the Scottish Department of Education, and in Northern Ireland the Ministry of Education for Northern Ireland. The existence of the institutes of education in England and Wales has the effect of giving the English Ministry relatively less control over curriculum than is held by the Scottish Department of Education or the Ministry in Northern Ireland. Each institute is responsible for the syllabi of the colleges it supervises and for regulations as to course standards and examinations. The result is less uniformity in specifics than is the case among the Scottish institutions.

It should not be concluded from the foregoing that uniformity has bred rigidity and minimized opportunity for "grass-roots" reform. Most British teacher training institutions hold to the idea that curriculum is an ongoing process, amenable to change, and actively involving faculty participation. Individual faculty members have considerable control over the development of the courses they teach, and individual colleges can initiate recommendations to the institute of education at any time.

The majority of students in training colleges is enrolled in the primary school program. A directive implemented by the university institutes of education in October 1960 provided that teachers colleges limit their secondary curricula enrollees to fifteen per cent of the total student body, but as pointed out earlier, many of the colleges have interpreted this somewhat liberally as a suggestion rather than a limitation. Some of the "name" colleges such as Homerton at Cambridge enroll as many as thirty-five per cent of their students in secondary school programs.

With rare exception, only women are preparing for teaching younger children. The percentage of men preparing to teach is increasing, but actual enrollment of men in elementary programs is negligible. Men do, however, outnumber women in the junior-secondary curricula. Cognizant of the 1960 directive limiting secondary enrollments, several training colleges have accepted men for junior-secondary places rather than list them as enrolled in the secondary program. Secondary programs predominate in the university education departments.

In British teacher training institutions the following course work is generally required of prospective primary and secondary teachers, usually during their first two years: written and spoken English, mathematics, biological and physical sciences, geography and history, physical and health education (placed under the professional education sequence at some institutions), and divinity or religious education. Some variation is found from college to college in terms of the amount of time spent on these subjects. In many training colleges arts and crafts and music are required of all students. Usually, however, this requirement is applicable only to primary trainees.

Child growth and development concerns--efforts to help students get to know children, their needs, interests, readinesses, and capabilities--

figure prominently in the primary programs of the British teacher training colleges. This is particularly true in early childhood education. A case in point is the approach used at St. Katharine's College of London (now the College of All Saints). Learning experiences in the first year are oriented toward providing both a theoretical and practical foundation in child growth and development. A plan is employed that enables students to begin their studies in education by studying children in a variety of situations.[108] The underlying philosophy of this experimental approach is that students need to know children just as they need to know what and how to teach them. Thus, first-year students take formal course work in child behavior, and participate in a year-long series of classroom observations designed to help them augment lecture hall knowledge with the study of children in the real situation.

Even in the case of those preparing to teach in the more academically oriented upper-primary levels, teacher education programs are not exclusively constrained to subject matter. Ample provisions are made for the inclusion of a variety of important "non-academic" subjects. At Glasgow's Jordanhill College, courses are given in needlework, educational handwork (crafts), gardening and fabric weaving. Women preparing to teach in the primary schools must take two year's work in needlework and one in educational handwork. Persons preparing at the Leicester Teachers Training College for positions in the junior school are required to take courses in music, movement, speech and drama, arts and crafts, and outdoor pursuits (includes life saving, canoeing, camping, etc.). Such courses, save outdoor pursuits, are typical of the required "non-academic" work in the various colleges. Belfast's Stranmillis College has the customary required courses in art, crafts, etc., and complements these with work in nature study and gardening. The latter is required of students intending to practice in the Belfast area where new primary schools are being equipped with their own greenhouses. The inclusion of such courses in the curriculum and the construction of excellent facilities in which to teach them is based on the recognition that the proper education of the pre-secondary teacher demands more than extensive mastery of the academics. Many British educators hold that matters of the hand represent significant learning needs in primary teacher education just as do matters of the mind.

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[108] "Teaching Practice Experiment at St. Katharine's College," University of London, Institute of Education Bulletin, New Series Number 1, (Autumn Term, 1963).

Interviews revealed that at several training colleges the "main" subject was in arts and crafts or divinity, rather than in one of the traditional academic disciplines. Another interesting feature of some training college curricula was course work in social or environmental studies. This consists of a field study in depth of some aspect of the local area.

Degree holders seeking to meet certification requirements take very little work outside the "teaching course of study." At the Scottish institutions and a few in England the graduate level programs do include English and speech, religious education, and health and physical education.

In common British parlance Education (professional education) is viewed as one course which, for instructional purposes, is broken down into at least six different segments. While work in each segment is required, the time emphasis and sequence vary among colleges. Included in the education "course" are (1) aims of education and the British system of education, (2) principles of education, including history, philosophy, sociology, and psychology, (3) characteristics of children, often referred to as child or adolescent development, (4) school curriculum, appropriate to the age level a person is intending to teach, (5) methods work in the area of specialization, which in some colleges is incorporated into the subject matter preparation, and (6) student teaching, usually engaged in to some extent through all three years. As mentioned earlier, health and physical education may also be included. At the larger institutions work may be available in remedial education and the use of audio-visual materials.

The one year graduate level program consists of work in educational theory somewhat comparable to American courses in foundations of education, usually two methods courses, some teaching practice, and possibly statistics or audio-visual instruction. Several university programs placed little emphasis on practical work in the classroom. As has already been indicated with regard to other aspects of teacher education in the United Kingdom, here, too, there is more variation among the English and Welsh universities than among the Scottish institutions.

Students in the three year training college program select one or two "main" studies (majors in the United States) from different blocks of subjects. A subsidiary field is similarly chosen. The main subjects are studied during each of the three years, and the subsidiary for two years. The time devoted to "main" study varies, generally ranging from four to eight class hours a week, which time is devoted to lectures, seminars, tutorials, and laboratories. Graduate students in education at the universities are unlikely to be taking work in the academic content fields, having met such requirements in their degree programs.

Distinctions between programs of preparation for different grade levels appear more significant at the Scottish colleges of education. Primary school teachers-to-be work toward the Teacher's General Certificate; secondary people work for the Teacher's Special Certificate; teachers of specialized non-academic and technical subjects work toward the Teachers' Technical Certificate. While to some degree each college is responsible for its own curricula, as indicated earlier, regulations of the Scottish Department of Education result in basic similarities. The three-year program is undergraduate and includes academic courses along with those in professional education. The one-year program for university graduates (and all men must be university graduates) consists mainly of professional education courses such as methods, student teaching, and educational psychology.

Correspondence course work in the strict sense of the term does not exist, but many of the colleges, departments of education, and institutes offer conferences and seminars for in-service training and to augment regular offerings. Members of the research team did observe workshops established by institutes of education, and in-service summer courses provided by Scottish colleges of education.

The prestigious curriculum in British teacher education is that which prepares people for the "better" or higher status teaching posts, viz., those in the grammar schools. At institutions with graduate level programs in education, university degree holders are "looked up to." The discrete levels of status in British society clearly carry over into educational institutions, seemingly unaffected by the national policy of public financial support for every college student.

University programs in teacher education are graduate in nature in that they follow an academic degree program. The English and Welsh training colleges are overwhelmingly undergraduate, although a few, such as Homerton College and the College of St. Mark and St. John, have a small number of graduate level students enrolled in certain curricula, most of these people engaging in further preparation for teaching mathematics and natural science in the grammar schools. Scottish colleges of education offer the typical three-year training program and a one-year post-graduate program for university graduates. Colleges of education in Northern Ireland also have a small number of graduate students who are preparing to teach either in the primary schools or in secondary-modern schools.

Evaluation of teacher education curricula is both formal and informal, as exemplified on the one hand by the work of the institutes of education, and on the other by the many faculty meetings which often lead to proposals. A common procedure is for proposals emanating from faculty discussions to be presented to the academic council of the college, which is responsible for coordination and for changes in the curriculum. Proposals for major revisions resulting from the evaluation process must be considered by the university institute of education before they can be put into effect.

The increasing demand for places in higher education, for an equalizing of educational opportunity, and, on the part of some, for breaking down existing social inequalities[109] has been a spur to new programs and expansion of existing ones. English training colleges have been considering moving from a three year diploma course to a four year degree course, and at the City of Leicester and Gipsy Hill colleges preparation has been made for such conversion which might take place in the near future. Programs with a general education orientation, the most notable of which is the Keele experiment at North Staffordshire, are making an appearance but this is largely foreign to British college experience. This is also seen in courses cutting across traditional subject matter boundaries, such as "Our Scientific Age" and "Problems of the Modern World" offered at St. Katharine's College.

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[109] At the time of this writing, this latter point appears of major significance to the government, and may have been a contributing factor in the mixed British reaction to the Robbins Report.

Courses representing a noticeable departure from common practice are evident throughout teacher training institutions. The University College at Leicester is attempting to so orient teacher education that its students will learn to teach by discovering and intelligently coping with problems in real teaching situations. There was evident at Jordanhill a keen interest in the possible development of what American educators term social studies. At Homerton the natural science staff was in the process of orienting biology course instruction to prepare teachers for "new" biology in the secondary schools. Finally, topics such as "Freedom and Authority" are being developed with a view to providing future teachers with a means of studying British education from historical, psychological, philosophical, and sociological points of view.

Professional Laboratory Experiences

Observation, participation, and student teaching compose the total sequence of laboratory experience, there being progressively less observation and more actual teaching. It is common to find some laboratory experience during each year of a student's program. Because it is not until during his first year that a student selects his area of specialization and age level, he may have to wait until his second year to do field work in classrooms of his choice. He can expect, however, to do most of the second year and all of the third year work out in schools with the age level and subject area for which he is preparing to teach.

In Scotland all laboratory experiences for men are in the fourth year program. Women, usually enrolled in the primary program, will be in the schools during each of their three years, but the actual length and nature of their experiences varies depending on their college. In Wales teacher training colleges provide during the first year a four week laboratory experience, the first week being observation and the last three actual teaching. A variety of schedules is found in England. For example, the University of Leicester has two programs, one requiring eleven weeks of observation and teaching, and one requiring one day a week for the entire year.

Colleges expressed varying degrees of difficulty in placing student teachers. The problem is made acute because training colleges place students in all three years of their training. Placement is most difficult in areas of sparse population and where institutions compete with one another for placement in the same schools. Assignment of student teachers in the larger colleges is usually done by a coordinator released from part of his load for this purpose. At the other extreme are the university education departments where faculty members make their own arrangements for placement of their few student teachers. Swansea Training College has its placement done by the L.E.A.; the College of St. Matthias, Bristol, divides available schools among six members of the education staff who then handle placement in the schools assigned them; and at Notre Dame, Glasgow, the vice-principal places student teachers.

The importance of student teaching in British programs appears no greater than that of any one course. The national average for student teaching is eighteen per cent of the total course work. This figure includes all laboratory experiences. In England and Wales a common arrangement is three to four and one-half weeks of observation and student teaching in the first year, four to five weeks the second year, and six to seven the third, totaling thirteen to eighteen weeks of practice teaching. The length of time in the school is usually a full day, but some half-day experiences are arranged. Although the actual amount of student teaching varies, a student for certification must accumulate a minimum of 120 half-days of teaching.

In Scotland more practice teaching is required of persons in the primary program than of secondary student teachers. The explanation lies largely with the fact that most persons planning to teach in a secondary school are taking the one rather than the three year program. In Northern Ireland, Stranmillis College has one of the greater student teaching requirements in the United Kingdom, demanding that such teaching make up twenty-five per cent of the total course work.

The nature of supervision varies from general supervision of all student teachers in one school by a single tutor, to supervision on the basis of grade level and subject area. The amount of supervision by college or university staff varies from two visits in a twelve week term to visits twice a week. The extremes in the amount of supervision are found in the university programs, for here individual faculty determine the extent of their supervision.

Student teaching is often done in conjunction with a methods course, and the methods instructor, be he professional educator or subject matter specialist, is likely to do some supervision. In some instances students are supervised partly by an "education tutor" and partly by a "subject tutor," although the former is likely to do more of the visiting. A weekly session back on campus with the supervisor, meeting either individually or in a group, is extremely common.

Informal notes or cumulative records of visits are often kept by supervisors to evaluate the progress of student teachers. As pointed out earlier, some institutions may later make these records available to prospective employers. Weekly meetings between supervisor and student, and extra supervision where needed are common practices which provide additional opportunities for assessing student teacher performance. Success in first year student teaching is likely to be employed as a screening device to aid in determining whether a student should continue in his program.

In addition to the regularly scheduled laboratory experiences, a few institutions, of which Department of Education, University of Exeter is one, require students to make their own arrangements for a number of hours of classroom observation prior to undertaking the teacher education program. Since students in university departments of education have already been through a degree program and presumably have the extra years of maturity, this requirement appears reasonable and appropriate.

A few colleges maintain laboratory or demonstration schools, some of which are used extensively for experimental and demonstration purposes and some of which operate like other schools in the area. Almost all laboratory schools teach only the younger ages, the few exceptions being at the secondary level. Some colleges with no laboratory school have demonstration arrangements with a nearby school.

Institutional Setting, Facilities, and Instructional Materials

The educational systems in the United Kingdom are largely the result of national leadership in imposing a structure from above, a decided contrast to the American experience wherein the school resulted from the efforts of the farmers and tradesmen in the local community. As a result of these historical circumstances, the American school has been engulfed in the provincialism of the local community and has represented that community to the larger area of the state and nation, while the British school, its program, and its personnel have been the representative of the nation to the people. This situation and a long history contribute to a position of status held by the education institution and make its physical existence in a given community a source of pride, especially if there is a "time-honored" existence. The esteem in which the school is held carries over to professional education even though this is a recent newcomer to academic circles. While this newness may make professional education suspect to some, British educators and scholars are clearly determined to avoid the conflicts between academicians and professional educators which have marked the American scene.

The status of education and the national orientation of educational planning and thinking have resulted, in terms of facilities, in a fairly well balanced educational structure. Whether located in an urban industrial center or a rural agrarian area, the training college and university department of education have been able to draw upon national money and national brains, both of which have worked to minimize haphazard and unbalanced growth. Thus the socio-cultural community within which the British educational institution exists is, in a very practical sense, far larger than the geographic environs within which a college finds itself.

It is significant to note that the new institutions of higher learning, most of which are still in the planning stage, are not going to be located, as one might expect, in the growing population centers, where the demand for places is loudest. Rather, they will be placed in smaller suburban communities where the impact of the impersonalism and chaotic rapidity of metropolitan life will be less able to influence adversely the traditional academic routine. In what has become known world-wide as the British way --muddling through and crossing bridges only when one comes to them--the present problem of pressure on existing limited facilities is being met, not by a crash program, but by carefully thought out measures applicable to specific, limited concerns.

New classrooms, new rooms with special facilities, new libraries and laboratories, and instructional materials in the institutions visited evoked favorable responses from all members of the research team. Although it is evident that existing facilities are inadequate to meet the forthcoming demand, and some are inadequate for meeting the present demand, outweighing this condition is the general quality of these facilities and the uses made of them. Even more important is the fact that what has become inadequate, faculty office space and classroom places, is seldom if ever allowed to become intolerably inadequate. British teacher education faces a variety of problems, but few if any are allowed to become critical to the point where they adversely affect the preparation of teachers.

A remarkable transatlantic dual-pursuit is taking place, as each nation seeks to achieve what it thinks the other has. On the one hand, some British educators want to echo aspects of the American approach to elementary teacher education, which they believe to be predominantly child centered. On the other hand, some Americans want to emulate the British approach, which they regard as exclusively academically oriented. Thus, both nation states seem to be "passing each other in mid-Atlantic" as each seeks to achieve what it thinks is the other's desirable state of teacher education. Such state, in reality, no longer exists inasmuch as each of the two has already made modifications in the direction of the other's system. This movement gives testament to the need for expanded transatlantic dialogue between nations regarding desirabilities and realities in the preparation of teachers for children.

Chapter VI

SUMMARY OF REPORTS ON COLLEGE AND UNIVERSITY VISITS IN THE UNITED STATES

Scope and Limitations of Teacher Education Offerings and Services

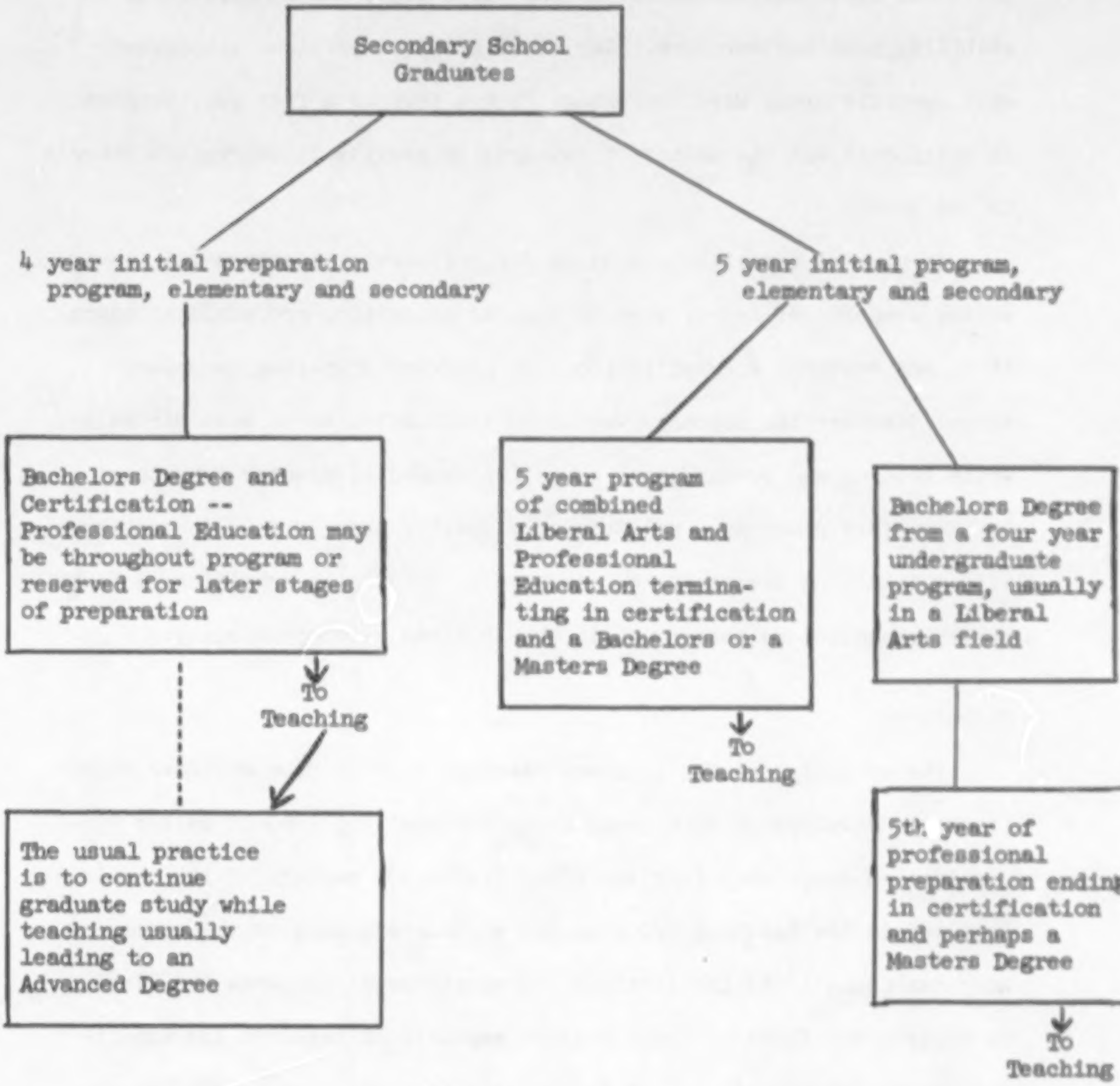
In the United States teachers are prepared in both public and private multipurpose colleges, colleges of education, universities, and liberal arts colleges. Public colleges of education, also popularly known as teachers colleges, train more elementary school teachers than do any of the other types of institutions. Universities and colleges of liberal arts tend to concentrate more on the education of secondary school teachers. Most schools offering teacher education programs, however, prepare people for both the elementary and secondary levels. University programs in teacher education are likely to exist in both the undergraduate and graduate levels, while multipurpose colleges, teachers colleges, and colleges of liberal arts tend to have only undergraduate offerings. The explanation for this limitation is, as regards to multipurpose colleges and teachers colleges, largely historical, for many of these institutions were formerly normal schools which once had a program academically inferior to those of four year colleges. Liberal arts colleges tend to be known as "colleges" rather than "universities" when they offer no graduate work whatsoever. Some institutions originally founded for teacher education purposes have developed into universities with several thousand students, but have continued to be single purpose schools. An example would be Illinois State University which in slightly over a century has grown to over 7,000 students but still prepares all undergraduates for teaching certificates. Often the most important single factor in determining the extent of a teacher education program is the demand of people for admission into that program. Another factor of significance for teacher education in public institutions is the extent of financial support from respective state legislatures. The United States institutions visited are listed in Appendix C. Chart 4 indicates the general pattern of teacher education in the United States.

Large scale research and experimentation is generally confined to those schools of education connected to universities and, with a few notable exceptions, is generally absent from institutions with solely an undergraduate program. Much of the existing research is done not on a college-wide basis but rather by one or a few individuals likely to be engaging in such activity in addition to carrying a normal teaching load. The recently begun and rapidly growing outpouring of funds from the national government appears to be altering this situation in the direction of greater faculty participation in research projects, and while the great bulk of such funds has been going to the large, "have" schools, many small schools are for first time finding it possible to finance research. Nevertheless, at many of the schools visited by the research team there was little ongoing research, and even less provision for adjusting a faculty member's load to encourage and facilitate research.

Although the nature of the critical problems faced by the institutions visited varied considerably, certain issues tended to predominate. One of these was the pressure on existing facilities and the need for expansion. Increased enrollment and demands for even more admissions contributed to problems of financial instability and finding adequately prepared staff, especially for such positions as supervisors of student

Chart 4

TEACHER EDUCATION IN UNITED STATES


Secondary School Graduates
4 year initial preparation program, elementary and secondary
5 year initial program, elementary and secondary
Bachelors Degree and Certification -- Professional Education may be throughout program or reserved for later stages of preparation
To Teaching
The usual practice is to continue graduate study while teaching usually leading to an Advanced Degree
5 year program of combined Liberal Arts and Professional Education terminating in certification and a Bachelors or a Masters Degree
To Teaching
Bachelors Degree from a four year undergraduate program, usually in a Liberal Arts field
5th year of professional preparation ending in certification and perhaps a Masters Degree
To Teaching

teachers. Financial problems appeared to generate other forms of instability, some of which involved administrator-faculty relationships. Where, as in some public institutions, legislative appropriations are a political issue and subject to annual variations, the atmosphere of instability took another form. Two final critical problems associated with specific areas were the change from a four to a five year program in California and the matter of integrating previously segregated schools in the South.

In general a quality education for pre-service teachers was viewed as one composed of course work in general education, professional education, and academic specialization. In programs preparing secondary school teachers the emphasis was on specialization in an academic major, while general and professional education seemed of greater importance in elementary programs. Maintaining a quality program seemed synonymous with maintaining the status quo in several schools, a condition at least partly explained by absorption in the problems cited previously.

Objectives

The teacher training programs observed tend to have as their objectives the development of a sound general education, subject matter specialization competency (for secondary trainees), mastery of the skills involved in the teaching process, and an understanding of the nature of American educational institutions. Graduate level programs are likely to replace the first of these with an emphasis on research and experimentation, and preparation of specialists in areas such as administration, supervision, and guidance and counseling.

The establishment of objectives is usually a joint faculty and administration venture. In several observed instances, the latest statement of aims was the result of preparation for evaluation by representatives from an accrediting organization. At a few of the public institutions objectives were formulated by a politically appointed board,[110] and in some church-affiliated schools the governing board of the church exerts a degree of control over educational objectives.

Underlying the objectives of teacher education programs is a commitment to the American system of democracy, and a belief that education can develop good citizens and is more likely to realize this potential with a well-prepared teaching staff. General objectives--in contrast to specific goals--tend to be alike for all branches within an educational institution and for all departments within a teachers college. The specific goals peculiar to colleges of education within a university setting include the meeting of state certification requirements and the development of those skills, attitudes, and understandings appropriate to assuming a teaching career. At liberal arts colleges these specific goals are likely to be peculiar to the department of education. At teachers colleges they are likely to permeate all aspects of the school's program.

Organization and Administration

The almost universal hierarchy of administration for American colleges and universities begins with a board of trustees or regents at the top, followed successively by a president, vice-president, chancellor, or academic dean, or administrative assistant. There are also such general administrative personnel as librarian, personnel director, registrar, treasurer, public relations director, business agent, athletic director, and director of graduate studies. The board of trustees is usually composed predominately of representatives of supporting or founding agencies. Some teachers colleges or branches of a state university system have no single board of trustees but come under the same board of trustees for the entire state system. Unless the institution is exclusively a teachers college, the education area is usually defined as a college, school, division, department within the total institution, or department within a college of a university.

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[110] For example, a newly formed Board of Regents of Eastern Michigan University, created in 1963 under the revised constitution of the State of Michigan, establishes the general objectives of Eastern Michigan University.

The divisions or schools of education are usually departmentalized. The two principal organizations for teacher education consist of (1) departments of curriculum and teaching, foundations, and psychology, or (2) departments of elementary education, secondary education, and student teaching. There are also departments within the schools or divisions of education such as guidance, special education, and laboratory schools. Education and psychology are often combined in the same department or division.[111]

In addition to departments within divisions or schools of education, there are related adjunct areas. These vary with the historical development of the institution. They typically include such areas as business administration, physical education, home economics, industrial arts, and vocational education. Other commonly found departments include administration and supervision and higher education.

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[111] This is true, for example, at Northeastern State College (Oklahoma) and at Louisiana Polytechnic Institute, where all psychology is within the division of education and psychology.

While the usual procedure is for subject matter courses to be taught by specialists in academic departments and for methods courses to be taught by professional education specialists in education departments, secondary methods courses are sometimes taught by the former in the academic departments. Occasionally the preparation of teachers for specialties such as home economics and industrial arts takes place not within the department of education but rather within the home economics department or school of home economics.

The degree of autonomy within divisions of education varies greatly from institution to institution. Usually certain functions such as approval of courses or programs are restricted to approval by the total institution authority. Although administrative officers almost always have ultimate control over curriculum and policy decisions, in actual operation these decisions are often made by representatives of the faculty or by the total faculty, and such decisions are respected by the administrative officers. There is usually an institution-wide council or committee on teacher education. Exceptions, however, can be found and usually are explained by either a high degree of segmentation of teacher education or an accumulation of power in the hands of the chief administrative official.[112]

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[112] A somewhat unique administrative organization is found at Pacific Lutheran which has two principal divisions, the College of Arts and Sciences and the College of Professional and Graduate Studies. The School of Education is within the College of Professional and Graduate Studies, and is headed by a director under the College of Professional and Graduate Studies dean. At Pacific Lutheran University no institution-wide committee on teacher education exists in spite of the urgings of the division of education for the establishment of such a body. Some departments of education, such as those at Sacramento State and Lamar State, had a high degree of autonomy in controlling the professional program and the students in education. At the latter institution segmentation was especially noticeable on the secondary level. The department of education at Lamar State was simply a service agency providing professional courses for the subject matter departments. Eighteen different departments offered education courses and handled certification of students.

The institution-wide council or committee which dealt with teacher education was at some institutions elected and at others appointed. In some instances this council handled all academic matters of the school. In other institutions a president's council or a dean's council handled policy decisions.[113] Often the university-wide teacher education committee recommends a specific action which then is taken by a faculty council.

Student Personnel Programs and Services

Students enrolled in teacher education programs across the United States are typically from the upper-lower, and lower-middle, socio-economic classes. Private institutions tend to have more middle class students than do most state or public institutions. Negro institutions, such as Livingstone College in North Carolina, tend to have a relatively high percentage of lower class students.[114] State institutions tend to serve a limited geographic area, either a section of a state or the state as a whole.[115] Municipal institutions, both public and private, tend to serve a metropolitan area with most of the students commuting from their homes. Denominational institutions serve wider geographic areas, with varying percentages of students from the supporting denomination. The best known state and private institutions serve the nation or major sections of the country.

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[113] An example is Eastern Michigan which has an advisory council consisting of the deans plus a faculty council with the real power held by the president.

[114] It should not be inferred that a high percentage of lower socio-economic class students means a high percentage of relatively low academic achievers. At Livingstone College for example persons desiring admittance must rank in the upper sixty-five per cent of their high school class and must meet minimal scholastic aptitude standards on nationally administered examinations.

[115] The legislatures of four states have passed laws requiring state universities to accept into the freshman class all applicants who are graduates of an accredited high school within that state.

A breakdown of students into percentages of male and female enrollees reveals a variety of patterns across the nation. Institutions which have evolved from normal schools to teachers colleges are likely to be found with a predominance of female students. Schools whose major program is in elementary education tend to have a predominantly female student body.[116]

Foremost among the qualities desired in students is a satisfactory academic record. Consideration is also given to characteristics such as emotional stability, maturity, personality, and effectiveness of oral and written communication. Official pronouncements indicating the qualities desired are also likely to include labels such as "democratic ideals" and "zeal for education."[117] Little recruitment for teacher preparation programs appears to take place beyond contacts with school counselors, distribution of printed brochures, and an occasional "open house" when high school students are invited to visit the facilities of the college. A growing number of institutions have full-time public relations personnel who actively recruit academically qualified students by visiting high

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[116] The percentage of men enrolled in elementary programs is constantly increasing as more and more men find the avenue to top administrative posts, hence to better salaries, is more easily traveled in an elementary program where the competition is predominantly female.

[117] Livingstone College recruits "people who like people." Church institutions often have specific regulations requiring attendance at religious exercises and prohibitions against drinking and smoking.

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schools and talking to pupils.[118]

The point of initial admission to teacher education occurs in some schools at the time of admission to the institution, in others at the end of the sophomore year, in a few at the end of the junior year. Examples were even found of schools with five-year programs of initial preparation wherein entrance to teacher education took place with the fifth year. No students from fifth or five-year programs were included in the American sample, however. Undergraduate admission varied from universal admission required by law for some state institutions to high standards at other state institutions.[119] Screening devices for admission include reading tests, speech tests, personality characteristics tests, cut-off scores varying from 400 to 450 or higher on nationally administered College Board Examinations, rank in high school graduating class, the American College Test, health examinations, screening committee interviews, and, in New York, the Regents' examination. A number of state institutions which take students from both within and outside of the state are likely to have higher entrance requirements for those from out of state.

Screening after initial admission for the purpose of determining whether a student should continue in the teacher education program is often solely on academic grades. Among the schools visited a "C" average represented the lowest acceptable grade for entrance into student teaching. Some examples of the variations found were (1) Fitchburg State College (Massachusetts) where the only screening was departmental recommendation prior to student teaching, (2) Northeastern State College (Oklahoma) where extensive testing of ability, attitude, and personality took place in the introductory education course, and (3) Fredonia State College (New York) which, in common with many institutions, screened at the end of the junior year just prior to student teaching.[120]

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[118] Recruitment of athletes, another form of recruitment by American colleges and universities, tends to directly affect education departments only when the athletic department is organizationally connected with professional education, and when athletes are enrolled as education (often physical education) majors.

[119] The University of California at Santa Barbara only admitted students who were in the upper 12.5% of their high school class and who had a grade of B (3.0) in their academic majors. The policy at Taylor University, Upland, Indiana, by way of contrast, is based on the belief it is not so much the top 10% as the next 40% that make the greatest contribution to mankind.

Most colleges and universities have a counseling center to which cases can be referred or to which students can go voluntarily. Some institutions such as the University of Missouri have a mental hygiene clinic in addition to a counseling center. Most institutions have a system of advisors with these persons being in education, in academic departments, or from both education and academic departments. Other student guidance and counseling services which were available at various institutions included the dean of students, dormitory advisors, a student center or union services, and specialized services such as safety, housing, and foreign student advising. At Lamar State, the professors in guidance and counseling often informally accepted referral problems since the institution had no other provision for such referrals. At some institutions advising students was taken into account in determining teacher load as at Eastern Michigan University where advising counts for one-fourth of the teacher load.

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[120] One of the most extensive screening programs found was that at Pacific Lutheran College where admission to a teacher education program at the end of the sophomore year was based on tests of speech, voice, grade average, personality, achievement, scholastic aptitude, purposes and ideals, selection and planning of a program, and approval of individual faculty member after a conference.

No common record keeping system was observed, the one universal being the keeping of academic records in a records or registrar's office. Departments of education or advisors within that department often kept records on students. These were sometimes duplicates of the general records, or sometimes records only of students' professional progress such as applications for student teaching, records of laboratory experiences, and courses taken. Sometimes all records were either kept or duplicated in the education department. At some institutions, such as Lamar State, academic records are kept at one place, professional education records at another, and disciplinary records at still a third location.[121] Teacher placement services sometimes kept records as the students progressed through the program but more often compiled only placement papers at the time of graduation.

All the institutions visited in the United States had a teacher placement service. At the teacher placement office openings were either posted or published. Some offices made provision for interviews on campus. In general the services of placement bureaus were either free to students or a nominal fee was charged. Many colleges, especially municipal institutions, tended to place the overwhelming number of their graduates in their local areas. For example, Sacramento State College (California) placed 99% of its students in Sacramento County. The files of placement bureaus usually included recommendations from cooperating teachers, college supervisors and other faculty members, academic records, and certification information.

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[121] At the College of St. Teresa in Winona, Minnesota, non-academic records were kept in the guidance office and in the placement office. At the University of California at Santa Barbara the credentials office kept the students' records.

All institutions planned their program to meet the state certification requirements in the state where they were located. Some institutions merely met minimum state requirements, while others went far beyond state minimums in subject matter and/or professional preparation. In many states college endorsement of a candidate is necessary before the state department of education will certify him. In contrast to the usual practice where good teacher education programs of teacher training institutions tend to go beyond the minimum requirements established by the state department of education, institutions in Texas may not permit more than ten hours of professional course work in their programs. No program in Texas which exceeds the state's minimum standards will be approved by the state.

The status of education students as contrasted to that of other student groups varied from the highest at some institutions to the lowest at others. Members of the research team gained the impressions, for example, that education students held the highest status among the student body at Louisiana Polytechnic Institute, and the lowest at Sacramento State College. Instances were found where low status was assigned not to education students as a group but rather to elementary education students. This appeared to be the situation at the University of California at Santa Barbara.[122] At several institutions education students held student offices out of all proportion to their numbers. At others these students received honors and were members of honorary organizations out of all proportion to their numbers.[123]

A large variety of grants, loans, and scholarships were available to students at all institutions visited. Nearly all of these institutions had National Defense Education Act money available for student loans. University or institution-wide agencies were usually present for handling all student scholarships and loans. Some state schools continue to have very low tuition charges for in-state residents, as for example Lamar State with a tuition of $80 per semester for residents. Louisiana Polytechnic Institute had no tuition for Louisiana residents. Self-help arrangements, whereby students work on campus or in the community, are found at several schools. Finally, a well known aspect of the American college scene is the prevalence of athletic scholarships at many institutions.

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[122] For British readers the explanation of this last phenomenon lies in a commonly held view that academic demands are far less stringent as regards elementary students than regards secondary education students or liberal arts students. Evidence for this belief is lacking but the opinion persists.

[123] At Louisiana Polytechnic Institute 130 of 309 Phi Kappa Phi honor society students were education majors. Three-fourths of the social and honorary fraternity officers at the school were education students.

Faculty

At most institutions possession of a doctorate (or being within arm's reach of it) is essential for appointment to the faculty of education. Public school teaching experience varies from an absolute requirement at some institutions to being desirable at others. Only one institution of those visited--Fitchburg State College--had no public school teaching experience requirement. Most education professors, however, have had elementary or secondary school teaching experience. Generally speaking, qualifications for faculty members within and outside the field of education are the same. Frequently visitation team members found the percentage of doctorates among education faculty appreciably higher than in other departments or other colleges of a university.[124] The percentage of doctorates held by the academic staff members in institutions visited varied from 35% to 100%. In the majority of cases, at least 70% of the education professors had doctorates. Typically most of those without that degree had the master's degree and were working toward the doctorate.

Four levels of academic rank--professor, associate professor, assistant professor, and instructor--were universally found in the institutions visited. Salary minimums and maximums for each rank varied considerably from institution to institution. Furthermore, at any one institution the possibility always existed that a person at one particular rank might be receiving a salary in excess of that received by a person at a higher rank. Salaries inject a competition for talent not seen in British colleges and universities where salaries are set nationally. Small American colleges with limited funds often are unable to compete with salaries offered by larger institutions.

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[124] For example, at Northeastern State College (Oklahoma) the percentage of education faculty with the doctorate was over 90% whereas the percentage for the entire college was between 40 and 50%. Data supplied by Illinois State University indicated that among full-time professional education faculty 74.5% held an earned doctorate, and 94.5% had elementary or secondary school teaching experience. Among full-time faculty at that institution who were only part-time in professional education, the comparable figures were 50% and 73%, respectively.

The most common teaching load for education faculty was twelve hours per week. Customarily this included some student teacher supervision, load credit for which varied from one-half to one hour per student supervised. Several colleges reported loads of fifteen or more hours per week. In at least one of these institutions this was recognized as an overload and reduction was expected. Interesting arrangements were found at Sacramento State College and at Rhode Island College. At the former institution three of the twelve hours of the normal load were allowed for student advising; at the latter a professor's classroom time might be reduced if he were engaged in research. Several institutions made appropriate load reductions for collateral and administrative assignments.

Overwhelmingly the trend is to assign the professor to teach in his area of specialty. In large colleges and universities this is exclusively done. Smaller schools find it difficult if not impossible to allow such specialization, partly due to having fewer available staff members and partly because there are fewer students available for enrollment in highly specialized courses.

The traditional lecture was the most popularly found teaching procedure, though strong preference was shown for discussion techniques and newer approaches such as team teaching. Students at the University of California at Santa Barbara reported decidedly fewer lectures in education than in other departments of the university. Closed-circuit television and other modern multi-sensory media were commonly seen at the institutions visited. On-campus classroom demonstrations for purposes of augmenting regular instruction were found at a few institutions.

Most education faculty are full-time employees of their respective schools. Many colleges have no part-time faculty in education, and of those that do, only a very small percentage of teaching faculty are in this group. When part-time faculty are hired, they are often used to supervise student teaching. Retired teachers occasionally can be found filling such posts.

A sabbatical leave policy was a commonly encountered provision for faculty growth. In certain cases, however, such leaves appeared to be more a fancy than a fact because, for example, legislatures in California, Michigan, and Massachusetts failed to provide sufficient funds to underwrite leave-taking to any appreciable degree. Faculty in the state university system of New York must find their own replacements when they desire to take a sabbatical leave. A few institutions such as Northeastern State College (Oklahoma) and Louisiana Polytechnic Institute provided financial assistance to faculty members engaging in further graduate study.

Curricula for Teacher Education

In the main, institutions visited tended not to develop separate and distinct statements of objectives for teacher education programs. These were, instead, generally incorporated into the set of objectives developed for the department (or college) of education as a whole. An exception to this was Livingstone College which had formulated specific objectives for teacher education dealing with developing professional attitudes, stimulating creativity, meeting certification requirements, developing personal qualities essential to good teaching, achieving competence in fundamental learning skills, cultivating sound values, and learning methods of evaluation.

Broad faculty involvement in teacher education curriculum development was found to be the rule. In most colleges any faculty member is free to generate ideas for program advancement and present them for consideration. Such ideas are generally received by a teacher education curriculum committee made up of education faculty members. At institutions such as Sacramento State College and Lamar State College, membership in this kind of body included professors from departments other than education but who were associated with teacher preparation. Generally speaking, a change affecting only the college of education needs only the sanction of that faculty. If, however, a more far-reaching change is proposed, it customarily requires the approval of a higher body such as a dean's or president's council. In certain cases proposed changes must be approved by the institution faculty.

In contrast to the above, one institution (Northern Montana College) reported no faculty involvement in curriculum development, citing as the reason the program constraint necessitated by adherence to state certification requirements and state university directives. Other institutions, however, indicated that attempts were made to develop curriculum beyond state regulations in order to augment basic certification requirements with what faculty members believed to be essential to good teacher education.

In common with the British situation, enrollment trends in American teacher education programs are decidedly upward. The ratio of students in elementary education to those in secondary varied. Roughly equal numbers of elementary and secondary students were found at such institutions as Eastern Michigan, Livingstone College, and Louisiana Polytechnic Institute. Numbers in elementary education were greater at Fredonia State College in New York, Lamar State College, and University of California at Santa Barbara. Secondary education programs were more popular at Fitchburg State College in Massachusetts, Sacramento State College in California, and Shippensburg State College in Pennsylvania.

Sizes of 1964 graduating classes similarly varied widely among the institutions visited. Among the largest was the University of Missouri where 190 were graduated in elementary education and 433 graduated in secondary. The sex ratio of this graduating class illustrates the widespread problem of attracting greater numbers of men to elementary education, for of the 190 graduates in the elementary program only 5 were men.

Elementary and secondary education majors tended to follow an identical course of study in general education. This holds true even in institutions following a pattern similar to that of Findlay College in Findlay, Ohio where elementary education majors are enrolled in the Division of Education while secondary students major in content divisions of the college. Hours required in the general education program, among institutions visited, varied from 40 semester hours to 70.[125] General education programs consisted of courses in English composition and literature, speech, humanities, art and/or music, social science, mathematics, natural science, religion (in some colleges), health and physical education, and philosophy. In most institutions concentrated work is done in the fields of English, social science, and natural science.[126] In some colleges, as for example at Louisiana Polytechnic Institute, education students take more work in general education than do students in other departments.

Patterns of professional education usually differ for the elementary and secondary majors although in some cases they may be quite similar. The typical pattern in professional education for the elementary major consists of about 30 credit hours of work. This is built around courses in foundations of education; educational psychology and/or child growth and development; language arts and/or children's literature; curriculum; arithmetic, reading, science, and social studies teaching methods; and student teaching. Elementary education students usually take more credit hours in professional education than do their counterparts in secondary education. Among institutions visited, this credit hour increase for elementary majors ranged from 3-14 hours. An area of concentrated study (tantamount to a minor) in an academic field (i.e., art, chemistry, English, French, science, etc.) is required of elementary majors in a growing number of institutions. This is designed to expand subject matter background of teachers-to-be and represents work in addition to that done in general and professional education.

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[125] United States institutions provide credit for all courses taken in semester credit hours if organized on the semester plan (two semesters per academic year) or in quarter credit hours if organized on the quarter plan (three quarters per academic year). One semester hour of credit is given for any course meeting one hour per week for the entire semester. (One quarter hour of credit equals 2/3 of a semester hour of credit.) Classes meeting two times per week carry two hours of credit, three times per week provides three hours of credit. A normal student credit hour load per semester is 15-16 hours. All reference to credit hours in this discussion will be in terms of semester credit hours.

[126] A typical general education pattern is represented by the following from Wisconsin State College at Whitewater: English--12 hours, mathematics--3, laboratory science--10, history--6, geography--3, music or art--2, speech--2, economics--3, political science or sociology--3, and physical education--2.

Hours in professional education taken by secondary education students ranged from a low of 18 to a high of 37 in institutions visited.[127] Some colleges offer special programs consisting of a reduced number of hours in professional education for non-education degree holders seeking to be certified to teach. In other institutions these concessions are not made, and such persons are held to the very same requirements in professional education as are the undergraduates.

The extent of work in the several subject matter fields for secondary education varies widely among the institutions, but the requirement for the standard major tends to fall in the neighborhood of 24 to 34 credit hours. The exact number of hours taken for the major field of study varies within some institutions according to the selected field, there being in these instances no attempt to standardize the requirement among the several subject matter departments. Where the student elects the standard subject matter major of approximately 30 credit hours, he is required to do at least one minor of 15-20 credit hours in another subject matter area. In lieu of the standard major/minor plan, however, students on campuses may pursue a broad field or comprehensive major in which case the minor is not mandatory. These broad fields are usually offered in areas such as science and social studies. Another possible arrangement in some schools is for students in secondary education to elect two 30 credit hour majors or a broad field major of approximately 50-55 credit hours instead of the conventional major/minor plan.

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[127] A typical program is that of Wisconsin State College at Whitewater. This 23 hour pattern includes work in education (presumably an introductory course), history of education or school and society, methods (major teaching field), measurement and evaluation, student teaching, and seminar.

Increasingly, subject matter majors are being required of both elementary and secondary education students and not just of the latter. This is the situation for example at Pacific Lutheran College where secondary school majors do 45 credit hours in a subject matter area, junior high majors do 24 to 28 credit hours, and elementary majors complete 24 credit hours. Secondary and junior high education students must take in addition one 17 to 21 credit hour minor. Elementary education students are required to do two 12 credit hour minors, but may present 12 hours of teaching methods work to satisfy one of these.

According to information gained in visits, the general pattern of work for majors in the subject areas is as follows:

English and literature -- credit hours for major ranged from 30 to 36 semester hours, with 30 being most popular. One institution recommended 51 hours but found 25 was average.

Speech -- requirements varied from 30 to 36 hours. Appeared to be more frequently offered as a minor.

Mathematics -- hours required varied from 24 to 33. One college required approximately 20 hours for a minor.

Science -- standard major requirement varied from 22 to 40 hours. One college required 40 hours for the general science major, 52 to 59 hours for a comprehensive major.

Social Studies -- hours required for major varied from 30 to 40 for the general major and 48 to 58 for the comprehensive major.

Only a handful of institutions visited offered correspondence work in connection with teacher education programs. At Eastern Michigan University students preparing for teaching careers may take up to 15 credit hours of work through correspondence offerings.[128] Nearly all the colleges had various kinds of extension offerings. The Sacramento State extension program included various kinds of professional workshops and summer demonstration school centers which attempted to familiarize students with dual instructional approaches and media.

Courses taken in common by elementary and secondary education students came mostly during the initial two years of one's college career when the student was doing his work in general education. General education courses were in point of fact usually taken in common by freshman and sophomore students from all departments (or colleges) in the institution. During the professional education phase of preparation, usually the junior and senior years, elementary and secondary students go their separate ways as regards course work, with the possible exception of foundations courses (i.e., educational psychology, philosophy of education, history of education, and educational sociology) which are sometimes taken in common.

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[128] Such credit hours are usually limited to freshman and sophomore course work.

Curricula in secondary teacher education were typically regarded as most prestigious. At Shippensburg State College, Pennsylvania, physics was reported as the most respected curriculum, while at the State University of New York branch at Fredonia, music (performing) was so regarded. Noted with interest was the fact that three colleges stated that elementary education was the most esteemed. On two of these campuses this was attributable to the relative strength of the elementary education course of study. One informant put it this way, "Most students consider elementary education tougher, hence it has more prestige."

Professional education curricula available in most institutions visited were undergraduate in nature, although some universities and colleges had both undergraduate and graduate programs. At California institutions, professional education is graduate in nature, the great majority of courses in education coming only after the student has attained the bachelor's degree. Fifth-year programs are offered in some institutions. At Northeastern State College (Oklahoma) such a program leads to the Master of Arts in Teaching. In consonance with state regulations calling for a mandatory fifth year of college for teachers, Pacific Lutheran University offers courses that can be used to satisfy this requirement. The "fifth year of college" work consists of 30 hours beyond the bachelor's degree which must be taken before completion of the sixth year of classroom teaching. Upon completion of 30 hours and two years teaching experience the permanent teaching certificate is granted. At least eight of these hours must be taken prior to the end of the third teaching year. Half of the courses must be at upper division level or graduate courses, and up to eight hours can be extension or correspondence work. Pacific Lutheran graduates, however, must take one semester in residence. Up to twenty hours can be taken during the initial teaching year, or prior to it. This "fifth year" does not necessarily result in the earning of a master's degree.

Generally speaking, institutions visited evidenced a good deal of activity in the realm of program expansion and development. At Sacramento State College, a recent reorganization had been effected changing separate elementary methods courses into en bloc offerings, such as a combined methods course in language arts and social studies. Northern Montana College was in the process of phasing out its two-year training program and adding English and qualification examinations to its regular teacher education program. Recent program modifications had been made at Northeastern State College to eliminate duplication and overlap in certain courses.

Teacher education curricula are evaluated primarily on an internal or self-study basis. Visits by national and/or regional accrediting teams provide external evaluations of curricula. Shippensburg State College (Pennsylvania) indicated its program was subject to evaluation by the State Department of Public Instruction which is also true for colleges in various other states. Several colleges reported that special faculty committees had been appointed to study education programs, though none gave evidence of having set clear and distinct procedures for such activity.

Professional Laboratory Experiences

Laboratory experiences other than student teaching may be classified into two types: (1) Observations and participation in connection with professional education courses, and (2) participation and leadership in youth organizations, scout groups, and recreational programs. Classroom observation and participation, although most related to methods courses, was also connected with courses such as introduction to education, educational psychology, school and society, and human growth and development. A few institutions stated that correlated laboratory experiences were incorporated into two or three courses.

Laboratory experiences almost always occur in community public schools and in laboratory schools on campus. There were generally no specified amounts of laboratory time required, but it was noted that several institutions placed a greater emphasis on these types of experiences in the elementary curriculum. Only one institution said it had no laboratory experiences prior to student teaching.

Assignment of students for laboratory experiences is generally the responsibility of the supervisor or director of student teaching. In one case the chairman of the department of education had this responsibility. Usually this procedure of assignment is done in cooperation with public school administrators and, occasionally, with the classroom teachers directly involved.

Student teaching was usually integrated with one of several related professional education studies such as a seminar, a seminar plus one or two courses, or a methods course. Credit hours given and the amount of student teaching required was as varied as the institutions themselves. The range of semester hours was listed as from three to sixteen, but included in these amounts were the related seminars. Some programs were one-half day experiences while others had full-day student teaching. Student teaching occurred within a one-semester period of time with some programs condensing this training into a one-half semester period. In many cases there was a differential between the amount of time required for elementary and secondary student teaching, elementary generally requiring more hours of credit. Several institutions offered alternate plans of student teaching in both time and amounts of credit.

Community and university laboratory schools are both used to implement student teaching programs. Public schools cooperating in student teaching were as far as seventy miles from the campus in some cases. However, in situations where great distances were involved, the students generally take up residence in the school community for the duration of the student teaching experience.

Supervision of student teachers varies from institution to institution. In general, however, there are two patterns: (1) College or university supervisor plus the cooperating teacher in the school, and (2) director of student teaching, plus methods (or academic) staff of the college, plus the local cooperating teacher. Typical student teaching activities may be summed up into one phrase--total participation in the teacher's role at the school assigned.

Evaluation of student teaching experiences is usually a cooperative effort between the college supervisor and the cooperating teacher.

In some cases the student also does a self-evaluation, but in all cases the final grade (evaluation) decision is in the hands of the college supervisor. Many institutions have an unofficial evaluation approximately half way through the student teaching experience. A few institutions, of which Taylor University is one, have changed to a pass-fail grading system. Taylor also has an arrangement whereby students failing to qualify for student teaching during their four-year program can stay on for a ninth semester in an effort to raise their grades.

Eight of the selected institutions visited maintained a laboratory school. In most cases, however, these did not include grades ten to twelve.[129] These schools were used for observation, participation, and student teaching. In a few cases they were used for small research studies.

Institutional Setting, Facilities, and Instructional Materials

The selected institutions visited were located in diverse settings. From New England to the Far West the locations were: Small New England community, suburb of a northeastern city, rural-small towns in the mid-Atlantic region, small urban city in the midwest, "typical college town" in the midwest, rural depressed and culturally disadvantaged settings in the central states, industrial and agrarian southern communities, urban locale on the west coast, a seaside, sophisticated, culturally flavored community, and urban locations in the northwest.

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[129] The campus laboratory schools at Illinois State University had 14 grades--four-year old kindergarten through grade 12.

Most institutions showed evidence of expansion, and many had large numbers of new buildings. Although some were located in middle to low class neighborhoods, all institutions were noted as having some distinctive physical features which set them apart from the immediate surroundings. Some of the smaller institutions gave evidence of financial problems, but most campuses were thought to be growing despite the varied limitations of space and means. Proposed new facilities were mentioned almost without exception.

In general institutions were reported to have adequate office and classroom facilities. Many institutions had new facilities of this kind but continued also to use the old or "temporary" quarters. Some locations apparently had a lack of privacy in office space but these facilities were still considered satisfactory. Special facilities were not found to be numerous or universal. Some of those noted were TV studio, calculator laboratory, testing and psychological laboratory, graphics center, remedial rooms (reading, speech), and data processing center. Research facilities in most cases were lacking, although a few institutions (especially the larger ones) did carry on some research utilizing the above mentioned special facilities. Library facilities appeared adequate in most respects and to be expanding holdings in curriculum materials. Audio-visual materials were generally judged to be limited. Several institutions needed more space as well as more equipment in order to have "good" audio-visual facilities and programs. Audio-visual needs were apparently being recognized, however, by most institutions.

Most of the institutions visited had curriculum libraries or curriculum materials centers. The administration of these facilities varied. Some were units of the professional education department or college, others were segments of the total institutional library program. In addition to the curriculum laboratory mentioned, one institution also had a language laboratory specifically for the training of language teachers. One institution reported a "professional library" with materials specifically for staff use. In general, college facilities and instructional materials were judged adequate to good by the visitation teams.

Chapter VII

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

A study of the magnitude discussed in this report has, of necessity, many facets. Its international nature plus the sheer bulk of data collected tends to produce loose ends. The process of teacher education with its sociological, methodological, and national factors is most complex. The job of unraveling and synthesizing these factors is an ongoing process which extends beyond this research effort and engulfs several research projects.

Summary

The purpose of this study was to assess and compare the intellectual and personal characteristics of pre-service teacher education students in the United Kingdom and the United States. This was a search for the facts. The initiation of the study was based on the premise that the facts were not known and that securing the facts would be a necessary first step to explaining them. Unfortunately, some popular writing in the field of comparative education has not been based on this premise. Also, this study is the first major attempt in the field of teacher education on a cross-cultural or cross-national basis to obtain empirical data. The authors feel that they have obtained some interesting facts but do not claim to have complete or even satisfactory explanations for the results based on the data. The portion of the report which dealt with visits to selected institutions in the United Kingdom and the United States was an attempt to provide explanations.

This project was an empirical study of teacher education trainees in the United Kingdom and the United States at three stages in the educational process leading to their first full-time teaching positions. These educational stages were the final year, one year before the final year, and two years before the final year. Elementary and secondary education students were involved. The dependent variables (23 for elementary, 22 for secondary) were selected to represent the areas of (1) attitudes and personality characteristics, (2) academic knowledge in humanities, natural science, mathematics, and English, (3) professional education knowledge, and (4) general intelligence. The factors under study such as country or year in college were, of course, fixed variables. There was no manipulation of independent variables and there were no experimental treatments applied.

A random sample of teacher education students was drawn for both countries using the intermediate unit of colleges. The United States sample consisted of students randomly selected from colleges previously selected with probability proportional to size. Size was determined by the number of elementary teacher graduates in 1961-62, the only national data obtainable for teacher education students. Colleges in the United States were arranged on a list prior to selection on the basis of three stratifying variables: accreditation, NCATE or Non-NCATE; region, as defined by the boundaries of the six regional accrediting associations; and type of institution, public or private. The United Kingdom sample consisted of two Northern Ireland and six Scottish training colleges and a probability proportional sample of training colleges and university departments of education in England and Wales. Again students were randomly selected from the sample, with pre-stratification based on geographical region, whether colleges enrolled students of one sex or were coeducational, and college size. The sample achieved for the United Kingdom was superior to that secured for the United States but the fact that United States data obtained was shown to be representative within all strata, except regional stratification, permitted viable comparative analyses to be made.

The test instruments used in the study were chosen because they assessed important cognitive and affective characteristics of teachers and teacher education students. The tests used were (1) The Comprehensive College Tests (ETS) for the fields of English Composition, Natural Sciences, and Humanities, (2) Cooperative General Culture Test (ETS) for Mathematics, (3) Teacher Education Examination Program (ETS) for Child Development and Educational Psychology, Guidance and Measurement, Instructional Methods, and Elementary School Education, (4) Ryans Teacher Characteristics Schedule, (5) Minnesota Teacher Attitude Inventory, and (6) Cattell Culture Fair Intelligence Test (IPAT). The entire battery took approximately twelve hours to administer and was taken in three sittings.

The study was ex post facto in nature and any cause and effect explanations are based entirely on a retrospective search. However, on the basis of the empirical data obtained, the authors feel certain that what they are trying to explain does exist rather than run the risk of attempting to explain a hypothetical and possibly non-existent situation. The major contribution of this report is not the explanations but the empirical evidence that describes the situation. The basic question of this study was, "What are teacher education students like in both countries?" and the secondary question was, "Why are they as they are?".

The first question was specifically answered in Chapter IV, Analysis and Results, and more generally dealt with in the conclusions. The second question is more directly attached to Chapters V and VI, which are concerned with institutional visits in the United Kingdom and the United States, and, also, to the discussions of each specific conclusion in this chapter. Some points on the first question bear repeating in the following paragraphs. The second question will be further discussed in the section of this chapter on implications.

The primary analysis was a statistical comparison between the country mean scores on the dependent variables. A student's t-test was used to test for significant differences between country means. The country mean was a weighted mean based on the population weights of the various strata involved in the analysis. The United States strata were based on the two dichotomies, NCATE--non-NCATE and public-private. The United Kingdom strata were the three geographical regions of England and Wales, Scotland, and Northern Ireland. In the final year secondary, the university graduates of England and Wales were also considered as a separate strata in the United Kingdom. The comparisons were made within the three levels of training and separately for elementary and secondary trainees.

The results on the teacher characteristics and attitudes measures for both elementary and secondary teacher education students in the United States indicated that they were more learning centered or traditional and less child centered in their approach to teaching than were their British counterparts. The same consistent pattern of contrast also held for elementary and secondary education student opinion of administrative and other school personnel, with United States students being more favorable and British students less favorable. Other findings on these measures were not consistent. Elementary education students in the United States in their final year revealed more emotional stability and, in their second year, more favorable opinions toward pupils than did British elementary education students. United States secondary education students in their second year, on the other hand, indicated more friendly, warm understanding, stimulating, and imaginative personality characteristics than did United Kingdom secondary education students.

Mean scores on verbal understanding and general intelligence tests were found in favor of the British over the Americans, especially in respect to elementary education students. Only the final year of college found secondary United Kingdom students scoring significantly higher on intelligence tests than secondary United States students.

The means on academic measures showed a large number of significant differences and some definite patterns. United Kingdom students at both the elementary and secondary education levels, consistently over all three years, scored higher than United States students in tests covering fine arts, literature, and mathematics. Elementary teacher education students in Great Britain persistently attained a higher mean score in English composition over all three years, but United States elementary teacher education students were just as consistently better in biological and physical science measures. United States and United Kingdom secondary teacher education students were evenly matched in the fields of English composition, biological science and physical science. United States secondary students bettered their British counterparts during the first year in biological science, but final year United Kingdom secondary student scores were significantly better than those of United States secondary students in English composition and physical science.

The elementary and secondary teacher education student means for both countries on professional knowledge measures, with few exceptions, had similar patterns with United States means being significantly higher than those of the United Kingdom. This was generally true for measures in child development, guidance and measurement, and instructional methods. There were no significant differences in the means for elementary teacher education students in both countries. At the secondary teacher education student level, American students scored significantly higher than British students on instructional methods in only the second year. The over-all tendency otherwise was for all United States students over all years to attain the higher mean on professional knowledge measures.

The pattern of the mean scores across the three years of training were also plotted for each country and separately for elementary and secondary teacher education students. Also, selected strata means were computed and presented in tabular form. This additional information was presented as an aid in interpreting the results and arriving at valid conclusions.

The positions of the means across the three years of training on the Ryan Teacher Characteristics measures remained rather consistent for the four groups plotted (United Kingdom and United States elementary and secondary teacher education students). Elementary education students in both countries tended to have higher mean scores on "understanding, friendly," "responsible," "stimulating, imaginative," "opinion of students," and "opinion of classroom procedures" measures than did secondary students. However, secondary students had the highest means on the "emotional stability" measure. The United Kingdom secondary group also showed a trend to become more "learning centered" over the years which appeared partly due to the inclusion of the Scottish and English graduates in the final year. Elementary teacher education students were less "learning centered" than were secondary teacher education students. British secondary students made a decided increase between the second and final years on the "verbal understanding" measure. Here, again, the inclusion of the Scottish and English graduates in the final year was, apparently, the telling factor for this increase. On the other hand, United States students were kept from scoring higher means during all three years by the non-NCATE accredited college student group who pulled down the higher mean scores attained by the accredited colleges, public and private. The same trends were noted for mean scores across the years on the Cattell Culture Fair Intelligence Test but the spread was even greater between United States and United Kingdom students. The United States groups showed consistent decreases across the years but the United Kingdom secondary revealed a slight but consistent upward trend.

The Minnesota Teacher Attitude Inventory means indicated somewhat differing and erratic patterns with elementary groups from both countries scoring higher than secondary with a marked increase for elementary between the first and second year. Elementary teacher education students contrasted with secondary, tended to be the more child centered and permissive according to test results.

Means on academic measures consistently favored United Kingdom students with noticeable trends year by year. British students consistently tended across the years to improve their mean scores, especially in fine arts and literature. The increase in means for United Kingdom secondary students in the final year was usually quite definite which again reflected the inclusion of the Scottish and English graduates in this year of training. On the other hand, the means across the years for United States students were often downward from the first year and much more so for elementary than secondary. This same tendency was noticed for United Kingdom elementary teacher education students from the second to the final year. Only on science measures did United States elementary students tend to have significantly higher means than their British counterparts. Strata means tables again indicated the downward pulling trend of the non-NCATE, private school student group on the total United States means and the upward pulling effect of the Scottish and English graduates on United Kingdom means. The downward trend of United States elementary teacher education student means across the years further indicates the pattern of American teacher education curriculums which tend to stress subject matter courses in the early years of a four-year curriculum. British students tend on the other hand, to experience subject matter courses across all years of education.

Plots of elementary and secondary student means on professional education measures over the years revealed a consistent upward trend for both countries. However, United States students consistently had higher means than United Kingdom students in their respective curriculums, with elementary education students tending to score higher on child development and instructional methods measures and secondary students higher on guidance and measurement tests.

Conclusions

I. United Kingdom teacher education students tend to have, generally, as indicated by test data, higher general intelligence and verbal comprehension than do United States teacher education students.

This conclusion undoubtedly reflects the higher degree of student selectivity operating in British higher education. Relative to the United States, only a small proportion of the eligible population in Great Britain find places in colleges and universities, and these tend to be the brighter students. In the United States, on the other hand, the college door opens wider admitting a greater proportion of youth with a greater range of intellectual capacities. One should note that society's point of view on educational aims differs in the two nations. The expectation in the United Kingdom appears to be that only the more highly qualified should go to college, whereas in the United States, the expectation is that some type of college education should be available for nearly all youth. Illustrative of this is the fact that approximately five per cent of secondary school graduates go on to college in Great Britain, but in the United States nearly six times (30%) this percentage enter college.

The non-NCATE, private-college strata of the United States population appreciably lowered intelligence test (IPAT) scores. This segment scored at levels considerably lower than (1) the overall average for United States institutions, and (2) the other United States groups. This, of course, tended to affect negatively the results of American institutions as a composite.

Regardless of their causes, the overall differences between United States and United Kingdom students in verbal comprehension and general intelligence have important implications for other findings in this study. For instance, one would expect that these differences would bear directly upon the knowledge and competencies demonstrated by these students in the areas of general and professional education. Thus, the more able group might, in general, be expected to perform better--except when differences in educational programs modify their performance.

> II. United States students tended to be more learning centered, while their British counterparts tended to be more child centered permissive. Interestingly enough, the findings, on which this conclusion is based, remained stable over the three stages of preparation (years) examined in the study and held for both elementary and secondary education students.

This conclusion based on Ryans "B" score results emerged as perhaps the most striking in the entire study--particularly in light of the prevailing American assumption which holds that British teacher education is nearly exclusively subject matter oriented and the fact that American teacher education has been criticized frequently as being excessively child centered in nature. The above findings cast doubt upon the accuracy of both these assumptions.

The subject matter oriented American students and the child centered orientation of British students may be a reflection of the manner in which these respective groups are taught. Members of the research team found collegiate education in the United Kingdom to be based on a highly personalized approach, with the typical student receiving a great deal of personal attention, instruction, and guidance from his tutor. British educators seem to place much value on knowing students as individuals. By contrast, the American student is often but a face in the crowd, rarely getting personalized attention, guidance, or counseling from his professor, and perhaps failing to form any other kind of attachment with him than that of a purveyor of subject matter.

Other contributing factors in the United Kingdom may have been (1) more favorable college faculty-student ratio, (2) relatively small college enrollments, and (3) teacher education curricula which encourage, in addition to subject matter competencies, the development of child centeredness, especially in the case of those preparing for teaching early age pupils.

III. Teacher education students in the United States hold more favorable opinions of administrators and other school personnel than do students in the United Kingdom.

This conclusion, based upon an analysis of Ryans "Q" score results was corroborated by the observations of research team members who visited institutions in the United Kingdom. In general, observers found the typical British school administrator to be somewhat aloof, being generally regarded as a towering, prestigious person who had risen to the top rung on the professional ladder. As such, the administrator in the United

Kingdom occupies a widely respected office to which attaches a kind of social distance that serves to set apart the administrator from the faculty, students, and public with whom he works. British administrators did not conceive of public relations as one of their functions (certainly not to the degree this is so conceived by American school administrators). In fact, British teachers appeared to be more concerned than administrators with establishing good human relationships.

This conclusion is supported by the impression that students in the United Kingdom tend to have a rather low regard for administrators. Their contacts with administrators are characterized by the administrators' approach, which more often than not, is authoritarian, rigid, and formal.

IV. United Kingdom teacher education students appear to be better prepared in the academic fields of study measured than United States students, except for the area of science, wherein United States elementary education students appear better prepared than their counterparts overseas.

As has been indicated earlier, one would normally expect the group comprised of the more able students to perform better on measures of academic performance. (Educational research has conclusively demonstrated that more able students perform better on academic measures.) In addition, it should be noted that results of these measures in the case of the United Kingdom students were considerably enhanced by the performances of the Scottish and English secondary education students. A substantial segment of this group consisted of those who had earned the university degree and were taking an additional year's work in professional education. The United States sample had no counterpart degree holders or persons taking an additional year of work beyond the baccalaureate. The composite United States performance was negatively affected by the scores of students in the non-NCATE, private-college group. Otherwise, all other groups in both nations did not appear markedly different in academic measures.

The finding that United States elementary education students scored higher than British elementary education students in the field of science and that there were no great differences between secondary education groups in both nations could be explained by two factors: (1) United States teacher education curricula (especially in elementary education) has emphasized all types of science content since Sputnik, and (2) elementary teacher preparation programs in Great Britain do not appear to provide such an emphasis on science, although a practical type of science education is provided, such as nature study and gardening. The emphasis is more oriented toward the humanities.

> V. The changes in measured academic competencies which occur across the three years of preparation reflect the recency of course work in the particular content area being examined, the basic sequential differences in teacher education curricula in both nations, and the performances of Scottish and English graduate students.

In general, academic performances of United Kingdom students tended to improve generally across the years, with certain distinct gains noticeable between second and third years for secondary education students. This latter rise clearly reflects the inclusion of Scottish and English graduate students in the United Kingdom's final-year sample. The slight general rise in British student performance is most likely attributable to the nature of teacher education programs which are structured so that most academic areas are dealt with each year.

Another illustration of the influence of curricular sequence on academic scores may be seen in the case of the performance of British students on science tests. Except for science majors, most students receive little or no course work in this area after age 16, and this period of lapse in contact with the area may account for the lower performance on the science test.

American students tended to drop in academic performance or remain steady over the three years tested. As with the British, this most likely reflects the prevailing organizational pattern of teacher education. Teacher education students in the United States customarily take academic course work during the early college years and, except for teaching majors and minors, little or no academic work is done during the latter years. This period of lapse in contact with academic areas and resultant forgetting may be the underlying cause of this phenomena.

Again, it should be noted that a high degree of selectivity operates in British collegiate education which serves to place only the more academically able in college and university classrooms. In addition, those who do find places in colleges and universities are primarily students from academically oriented grammar schools. Most likely, both of these factors serve to enhance the performances of United Kingdom students.

VI. American students appear to be better prepared in the measured areas of professional education than their counterparts in the United Kingdom.

To some extent this seems to be an unexplained phenomena inasmuch as British students in the colleges of education are exposed to professional education during each of their three years in the program. In addition, visits to teacher education institutions indicated that this exposure was more extensive than that given students in typical United States colleges. Granted a broader exposure to professional education, the expectation would be for a higher performance on the part of students in the United Kingdom; yet, such was not the case.

Student performances in professional education may be related to the differing nature of the secondary school education which the students receive in the two nations. In Great Britain, most college students come from the grammar schools in which academic studies are much emphasized, whereas in the United States, students come from comprehensive high schools that are not as academically oriented. It is possible that an American comprehensive high school education, by its very nature, creates a more positive readiness for dealing with professional education concerns in college. The performance differential may also reflect a bias in the tests which were given to measure knowledge in professional education. In actuality, British students were measured against American emphases in professional education content, which may not be the same as the professional education emphases in their culture. Regarding the performance of British secondary education students, it is interesting to note that Scottish and English graduates (university degree holders taking the year in education) scored on all professional measures as well as or better than students from colleges of education experiencing three years of professional preparation.

Implications

A major point to be drawn from this study is that we deal in popular misconceptions of what we think the other country is doing in teacher education. The British have tended to look upon United States teacher education as John Dewey oriented, progressive, and child centered while Americans have thought of British Isles teacher education as more traditional and subject centered. Perhaps each country is trying to emulate something that never was or isn't.

The specific results of the study point up some of these misconceptions. For example, the findings revealed that United Kingdom students had more child centered and less learning centered attitudes than those in the United States. Two misconceptions exist in terms of academic measures--one in terms of the differences and their magnitude and the other concerning the reasons for higher achievement in the United Kingdom. British achievement in academic areas was not exclusively and markedly above that of the United States. Differences did exist which favored the British in the humanities and mathematics and the United States in the sciences but they were actually quite modest. In light of the greater selectivity of students in the United Kingdom, it would be extremely tenuous to conclude that United States programs are inferior relative to academic achievement. Perhaps the United States should become more selective in college admissions, but this is hardly in keeping with the

American tradition. Another misconception concerns professional education knowledge scores which generally favored United States students. Although one might commonly expect this result, the emphasis in United Kingdom teacher education programs on "practical application" and the greater selectiveness of British teacher education students would lead to opposite expectations if all other conditions were equal. What is clear is that all other conditions were not equal. A possibility exists that the content of professional knowledge tests favored the United States student. The reader is reminded, however, that all tests were revised item by item by a group of British educators and the United Kingdom version of all tests were produced and judged as adequate by this group. Thus, the explanation of United States test content bias is quite tenuous especially with the reversal of the expected trend in the light of student ability. More information is needed on this finding.

Another noteworthy observation is that there was as much diversity in measured characteristics of teacher education students within each nation as there was between them. The basic orientation of the present study was that of examining extant differences in teacher education characteristics between students in Great Britain and those in the United States. Yet, throughout the study, investigators found that differences in practices and performances within each of the nations, at times, tended to be the more obvious and the more striking. These within-country differences cannot be explained on the basis of geography because the United Kingdom is relatively compact in area and the United States strata were not based on geographic region. The within-country differences may be due in part to differences in training programs. Evidence for this viewpoint was found in the United States where NCATE accredited colleges and universities tended to produce the better products. Also, differences within the United Kingdom tended to follow program boundaries. This was evident in terms of teacher education programs for the Scottish graduates, English graduates, and English and Welsh training colleges. The teacher trainee also brings to his college experience an educational, sociological, and economic background which undoubtedly has a considerable effect on his characteristics' scores. These backgrounds would possess considerable variation within a country. Finally, the effect of a training program is difficult to partition into that part due to program content and that part due to the methodology by which the program is taught. For example, the child centered scores in the United Kingdom may be due to methodology rather than content. Relatively large enrollments and large college classes may contribute to the learning centered scores of the United States trainees.

The British teacher education programs in training colleges appear to have achieved a better wedding between subject matter and professional education objectives, content and understandings than has been attained, generally, in the United States. United Kingdom students do not lag appreciably in any broad area of the teacher education curriculum. Observations of teacher education programs operating in a variety of institutions in both countries left observers agreed that the British system appeared to be giving proper and adequate stress to each component of an educational pattern designed to prepare competent teachers. Patterns of teacher education in the United States, on the other hand, were more erratic in their objectives, content, activities, and points of stress, lacking the consistency of those in the United Kingdom.

Some readers may be surprised that the between-country differences were not greater. This surprise may be due to some intuitive expectations. Actually difference and sameness is a relative matter. We could come up with the trite statement that "what they do is good for them and what we do is good for us." Such a conclusion fails to consider the complexity of teacher education for there is more to it than this. Teacher educators must have an ongoing process of research directed at determining for the products of teacher education programs (1) what are the existing characteristics, (2) what produces these characteristics, and (3) what are the desirable characteristics. This study dealt primarily with the first of these points and touched upon the second. Any one of these points suggests further specific research endeavors. For example, the patterns of performance across the years within a country could use some attention which could have implications for course sequence and content when planning a more effective teacher education program. Other within-country research efforts could be directed toward (1) clarifying the origins of the child centered attitudes of British students, (2) determining the causes of the learning centered attitudes of United States students, (3) analyzing the reasons for the rather consistent upward trend of United Kingdom student test score means across the years of training, and (4) finding the reasons for the differences in test performance for students from accredited and non-accredited colleges in the United States. Cross-national research must also continue. The present study could be replicated by comparing teacher education students of other countries with the United States. Variables, other than those introduced in this project, could be involved in such studies which would shed more light on the characteristics and relationships between students entering and graduating from teacher education institutions in different countries. A new research direction and opportunity beckons. It is hoped that many will follow such ventures and that the trans-ocean research dialogue and activity begun will continue.

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APPENDIX A

Standardized Forms and Instructions For Institutional Sampling

THE UNIVERSITY OF TOLEDO
TOLEDO 6, OHIO

COLLEGE OF EDUCATION
OFFICE OF THE DEAN

The need for research in teacher education keeps growing, as ferment in this area continues during the 1960's. Most research efforts, however, have been confined within the national boundaries, and no attempt from an experimental base has been made to compare teacher eudcation programs and products of the United States and other countries. Admiral Rickover, in his book AMERICAN EDUCATION - A NATIONAL FAILURE, indicates that the British system of education is superior to that existing in the United States. Other authors have uttered similar thoughts concerning educational systems available in other countries. It is necessary to learn more about the characteristics of teachers being prepared in pre-service programs under different cultural settings. The objective evidence available today is not at all clear on what educational programs or products are actually superior or, more important, what can be learned from valid comparisons of different education systems.

The enclosed statement provides information concerning a research project being undertaken by a research team at this institution which is partially supported by the Cooperative Research Branch of the U. S. Office of Education. This project would research the characteristics of teacher education students in the British Isles and the United States. Much interest has been expressed concerning the project. Dr. Edward C. Pomeroy, Executive Secretary of the American Association for Colleges for Teacher Education has been continuously kept informed of project developments and has indicated that he and AACTE are much interested in the project's outcome, especially its international implications. Dr. Pomeroy has expressed the hope that American teacher education institutions would see fit to cooperate in a useful and informative project.

Would you and your institution be willing to cooperate as one of 50 universities and colleges in the United States from which data could be gathered on pre-service teacher education students? I hope you can see your way clear to aid this research effort. A second enclosure is provided for your answer which can be forwarded to us in the enclosed return, stamped envelope. Your willingness to consider this request and possibly aid the research effort underway is appreciated.

Sincerely yours,

George E. Dickson, Dean and
Project Director

GED/dc
Enclosures: 2

UNIVERSITY OF TOLEDO
College of Education
Toledo, Ohio 43606

THE CHARACTERISTICS OF TEACHER EDUCATION STUDENTS IN THE BRITISH ISLES AND THE UNITED STATES

A research team from the University of Toledo has been awarded a contract from the Cooperative Research Branch of the U. S. Office of Education to research the characteristics of teacher education students in the British Isles and the United States. Many experimental and demonstration programs in teacher education have been devised and implemented. All such efforts, however, have been confined within the national boundaries, and no attempt from a research or experimental base has been made to compare teacher education programs and products of the United states and other countries. There is a constant need to become more aware of our own assumptions about and procedures in the education of elementary and secondary teachers through the process of looking beyond ourselves to the teacher education objectives, philosophy, patterns, and products of other countries. Fundamentally, American teacher educators must view more broadly teacher education programs and the students involved in them. It is necessary to learn more about the characteristics of teachers being prepared in pre-service programs under different cultural settings.

The principal purpose of the study will be to determine (1) teacher attitude and personality characteristics, (2) general educational preparation, (3) professional education knowledge, and (4) general intelligence of pre-service teacher education students in both countries. Emphasis will be placed upon the products of the teacher education programs at various stages in their training. Most previous research in this area has concentrated on program descriptions which have not made possible clear comparisons between the end-products resulting from such programs.

The following information is provided to you concerning the sample and testing needed in your institution. A random sample of approximately 100 students including sophomores, juniors, and seniors preparing to teach at the elementary and secondary levels would be tested at your institution. If you have fewer than a total of 100 students in the above categories, we would include all students that you have enrolled. If your institution does not identify students at the sophomore level in Education, we will simply omit that category in your case.

The testing will include tests of general knowledge, professional knowledge, and attitudes and personality characteristics. Let me emphasize that all data will be kept confidential and no institutional comparisons will be made.

The test materials (including instructions) will be mailed directly to your institution. We are asking that you indicate one of your staff members on the enclosed form as the institutional consultant. His responsibility would consist of assembling the sample and administering the tests. We will give specific instructions as to picking the sample. The institutional consultant will be paid a $50.00 honorarium. The maximum actual testing time required is three one-half day sessions, not to exceed 3½ hours per session. The administration can take place during May 1964.

Your cooperation in this study will be greatly appreciated. Please fill out the attached sheet and return it in the enclosed envelope within 10 days. Your aid in this project will make it possible to have better and clearer information on American and British teacher education products and their characteristics as potential teachers of our children.

George E. Dickson,
Project Director

3/16/64

THE UNIVERSITY OF TOLEDO
TOLEDO 6, OHIO

COLLEGE OF EDUCATION
OFFICE OF THE DEAN

(Please return this form in the enclosed envelope within 10 days)

Name of Institution ____________________

Institutional Consultant ____________________
Name

____
Title

____
Number and Street of University Address

____
City and State

College of Education Enrollment, Fall Semester or Quarter, 1963-64.

	Elementary	Secondary
Sophomores*		
Juniors		
Seniors		

Please place those students preparing for the Junior High Program in the Secondary classification. Do not include any individual more than once in the count.

The secondary sample is to include only the following majors: English, Foreign Language, Mathematics, all Sciences, Social Science and Speech. All other majors such as Physical Education, Home Economics, Business Education, Industrial Arts, etc. are not to be included.

All information on this form is confidential and will be used only in determining the sample. No institutional comparisons will be made.

*If Sophomores are not identifiable in your program, please report only Juniors and Seniors.

THE UNIVERSITY OF TOLEDO
TOLEDO 6, OHIO

COLLEGE OF EDUCATION
OFFICE OF THE DEAN

Let me thank you for serving as an Institutional Supervisor for the study titled "The Characteristics of Teacher Education Students in the British Isles and the United States." Your services are of utmost importance to the successful completion of the study. Although you may have to ascribe some of your efforts to "professional dedication," a $50.00 honorarium will be sent to you upon completion of the testing.

Your task can be divided into three main parts, each of which is discussed below.

1. Selection of students to be tested

The students to be tested should be distributed among six categories as follows:

	Preparing to teach in the	
Year	Elementary School	Jr. or Sr. High School
Sophomore		
Junior		
Senior		

The junior and senior high school sample is to include only those students with majors that are encompassed by the following areas: English (including speech), foreign language, mathematics, natural science, and social studies or social science. All other majors such as physical education, home economics, arts, business education, speech correction, industrial arts, agriculture, etc., are not to be included.

In order to assure a representative national sample, it is very important that you select students in such a manner that they are representative of the education students in your institution. If yours is an institution where all students in each category are being tested, this, of course, will be no problem. However, if you are sampling from a larger group, some random selection procedure should be used. A satisfactory procedure would be to obtain an alphabetical list of students in each of the categories. A systematic "random" sample can then be drawn within each category by selecting every n'th student on the list beginning with a randomly selected student falling between the first and the n'th student, inclusive. If you will be testing more than half of the students in a given category, this system could be used to eliminate students not to be tested. For instance, if you were testing 20 students out of the 30 in a category, every third student on the list could be eliminated from the sample.

2. Scheduling of testing sessions and notification of students

Test materials including an "Administrator's Manual" will be mailed to you on or about April 20. There will be three testing sessions which can be conducted anytime before the end of the current term and need not be on consecutive days. The first session will require about four hours, the others about three and one-half hours each.

It is very important that the selected students attend all three sessions. The value of anything you can do to insure a good response from the students cannot be overestimated. The enclosed packet of red cards should be used as a reminder of when the tests will be given. If you choose to notify selected students by letter, you may want to pattern the letter after the enclosed sample.

3. Administration of tests and return of materials

Information covering these points will be included in the "Administrator's Manual." Directions for administration of the tests should be self-explanatory.

If problems arise at any stage of the procedures outlined above, feel free to place a collect call to Dr. William Wiersma (Ext. 464) or Dr. Dale Prediger (Ext. 473) at the University of Toledo (Area Code 419, 531-1451).

Once again, let me thank you for serving as an Institutional Supervisor. We trust that our mutually cooperative efforts will make a significant contribution to the field of teacher education.

Sincerely yours,

George E. Dickson

George E. Dickson
Dean and Project Director

GED/hd
Enclosure

(SAMPLE LETTER TO STUDENT)

You are probably aware that the American educational system has been severely criticized in the popular press. American teachers and teacher training programs have been subjectively compared with the teachers and training programs in various foreign countries, notably Great Britain. In recognition that facts should be brought to bear on such important matters of opinion, the (local name of institution) is participating in research designed to determine what differences, if any, really exist between American and British education students. In order to provide data for comparisons, a series of tests will be administered to students in these two countries. You, along with some of your fellow students, have been selected to take part in the study.

The testing will be spread over three sessions. Our local testing schedule is as follows:

Date	Time	Place
______________	__________ to __________	______________
______________	__________ to __________	______________
______________	__________ to __________	______________

Please write this information on the enclosed card and keep the card as a reminder of the three dates when you will be taking the tests. I wish to assure you that your contribution to the study can be of real value to the profession which you are preparing to enter.

Sincerely,

NATIONAL FOUNDATION
for
EDUCATIONAL RESEARCH
in England and Wales

Director
W. D. WALL. BA.,Ph.D.

Please Quote in Reply

70 WIMPOLE STREET
LONDON W-1
Tel: WELbeck 8335
(4 lines)

Last October the Dean of the School of Education of the University of Toledo, Ohio, approached the National Foundation for co-operation in a comparative research study which is concerned with assessing and comparing the intellectual and personal characteristics of pre-service education students in the British Isles and Mid Western United States. Some details of the aims and plans are given on the accompanying sheets. The funds (106,000 dollars) for the research have been provided by the United States Office of Education.

The project has been discussed with Professor Tibble and members of the A.T.C.D.E. and the general approval of the Chairman of the Principals' Panel of the A.T.C.D.E. has been received. The National Foundation has assisted the research team in discussing the plans and drawing the sample of institutions being asked to participate. The Scottish Council for Research in Education and the Ministry of Education in Northern Ireland are co-operating in a similar way in Scotland and Northern Ireland.

The tests to be used in the study, while originating in America, have been modified for British use by a panel of British training college and educational research staff. The panel met with the research team in Toledo for two weeks. The tests cover subject knowledge (mathematics, science and English), professional knowledge (education, child development), intelligence, attitudes and personality. Some of the tests have already been used in Britain in other studies.

A sample of approximately 2,500 students is required to be drawn from approximately 40 institutions. The colleges and departments have been drawn on a statistical (random) basis and your college is one of those selected. We very much hope that you will be able to participate.

The project is the most extensive study to be conducted in training colleges in this country. As well as contributing to comparative education, the results will be available to us for additional within-country analyses. For the latter we are intending to call together a small committee to suggest the form such analyses might take. If you or a member of your staff would be interested in this aspect of the study please let us know.

We also wish to add to the main tests two others which are potentially valuable for colleges and departments. This occasion presents us with an excellent opportunity of trying these out and determining whether the tests have the value we consider them to have.

As the timetable for the project is a tight one we would be pleased to have your response to the invitation to participate as quickly as convenient and, if possible, not later than 28th April.

Yours sincerely,

Douglas Pidgeon.

Douglas Pidgeon,
Deputy Director.

THE CHARACTERISTICS OF TEACHER EDUCATION STUDENTS IN THE BRITISH ISLES AND THE UNITED STATES

From the proposal presented to the United States Office of Education the following extracts have been selected to give the general outline of the study.

" **I. PROBLEM**

The past decade has been a period of great ferment in teacher education which still continues. Many experimental and demonstration programmes in teacher education have been devised and implemented. All such efforts, however, have been confined within the national boundaries and no attempt from a research or experimental base has been made to compare teacher education programmes and products of the United States and other countries. There is a constant need to become more aware of our own assumptions about and procedures in the education of elementary and secondary teachers through the process of looking beyond ourselves to the teacher education objectives, philosophy, patterns and products of other countries. It is necessary to learn more about the characteristics of teachers being prepared in pre-service programmes under different cultural settings.

Various writers in comparative education have described teacher education programmes operating in European, African, Asiatic, Australian and Latin American countries. Such descriptions do not indicate empirically whether such programmes and the teachers produced from them are better or worse than those existing in the United States. What is more important, the lack of comparative studies in teacher education has greatly limited the suggestions of what is educationally possible through an examination of educational systems and students beyond one's own boundaries. Indeed, many criticisms of American teacher education rest upon the assumption that we have fallen away from higher, intellectual standards of European systems of teacher training.

This study proposes to conduct cross-cultural research on the teacher characteristics of British and American teacher education students. The selection of the British Isles for such research is based on the following reasons:

(1) a study of this type should logically begin in a locality where the English language is the common tongue, (2) teacher education in the British Isles has various points in common, as well as fundamental differences, with teacher education in the United States, (3) a minimum of administrative and technical difficulties are contemplated in comparative research between the two nations and (4) the College of Education at the University of Toledo has engaged in previous research efforts in the British Isles where contacts have been made which will effectively aid the completion of this study. "

" **II. ABSTRACT**

Objectives

The primary objective of this study is to compare pre-service teacher education students in the British Isles and the United States on specified measures in four areas, namely:

(1) teacher attitudes and personality characteristics, (2) general educational preparation, (3) professional education knowledge and (4) general intelligence.

> " Emphasis will be placed upon the products of the teacher education programmes at various stages in their training. Of particular interest will be the end product, the student at the end of the full training period just prior to the first teaching position. Trends in the characteristics across the final three years of training within the programmes of the two countries will also be analysed.
>
> Procedures
>
> The student sample to be included in this study will be determined by stratified random sampling techniques. Students will be administered a series of tests to cover the areas to be measured as indicated above. Instruments used will be standardized, published tests. Revision of these tests, appropriate for the British Isles, will be constructed in conjunction with educators from Great Britain. All tests will be administered through the co-operation of the University of Toledo research team and college officials. "

For a participating college or department of education, the demands to be made on it are as follows:-

1. Selecting a sub-sample of students preparing for general primary or secondary teaching at each year of the course. Such a sub-sample would be random and selected in accordance with specifications sent from the N.F.E.R. (Art, Physical Education, Domestic Science and Technical students are not to be included.)

2. Arranging for one member of staff to be responsible for organising the testing after attending a briefing meeting with University of Toledo staff. (Provisional dates 26th and 28th May - travel costs will be met by the project.)

3. Timetabling the testing which will be spread over two days (or three if more convenient for the college) towards the end of this term.

4. Returning completed test materials.

   Some colleges would be asked to receive a member of the Toledo University and to discuss training with him.

The main outcomes of the study can be summarised as:

International

First cross-cultural quantified study of teacher training.

National (England)

1. Important information about English training college students.

2. Norms on several tests now used or likely to be used in training colleges.

3. A set of data on which additional analyses can be carried out to answer questions not being specifically covered in the cross national study.

INTERNATIONAL STUDY OF STUDENTS OF EDUCATION

Institution ______________________________

1. I am willing for the college/department to participate in the study

Yes ______

No ______

2. The member of staff to whom further correspondence should be sent and who will attend the briefing meetings is:

____

3. The number of students taking three year courses, excluding those in Physical Education or Domestic Science "wings" (and Short Courses):

Nursery/ Infants/Junior	Junior/ Secondary			Secondary			Total		
Men Women Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
1st									
2nd									
3rd									

4. If your college has a 4 year course, please include the number of students at present enrolled in:

	1st year	2nd year	3rd year	4th year
Men				
Women				

5. Number of 1 year post-graduates: Men ______ Women ______

If a complete distribution of all students by course in the college is already available, would you please send this now, as well as completing the table.

6. Will any examinations be held before 1st June? Yes ______

No ______

N.B. It is essential that we have the answers to Questions 1 & 2 quickly. Please send these on a post card if time is needed to complete the other questions. All should be received by 30th April.

Please return to Dr. K.M. Miller, N.F.E.R. 79 Wimpole Street, London, W.1.

NATIONAL FOUNDATION
for
EDUCATIONAL RESEARCH
in England and Wales

Director
W. D. WALL. B.A., Ph.D.

Please Quote in Reply

79 WIMPOLE STREET
LONDON W-1
Tel: WELbeck 8335
(6 lines)

TU4

We are pleased that your college/department is going to participate in the cross-national study of teacher trainees.

A separate and later document will detail the number of students we would like you to test. On the assumption that you have nominal rolls for each group, a procedure has been set down for selecting the appropriate number in a random fashion. I cannot stress too strongly that basically the whole success of the project depends on a truly random sample being used. Further, the outcome does depend on testing the specified number of subjects in each college. We are aware that students in the final year of their course may go down immediately examinations finish. We hope that the randomly selected ones may be able to stay to participate in the study. If not, a procedure for selecting substitutions is provided.

The first letter referred to briefing meetings on 26th May and 28th May. It is hoped that these dates are sufficiently early for all colleges. If not, there is a meeting in Edinburgh, probably on 22nd May. Would you please let me know which of the two English dates is more suitable or if both are convenient. The meeting on the 26th will be at the City of Birmingham Training College and that on the 28th at the Institute of Education in London.

The care with which the project and the tests have been worked out and the ultimate value of the results, require that the area of subject matter be as broad as it is. The full testing battery will require the greater part of two days. This, it is realised, is possibly longer than some research tasks take. As already indicated, the tests could be spread over three days if more convenient. As soon as the full testing programme is received you will be sent a copy.

It is for the college to decide when the tests will be administered. It is essential, however, that they be completed this term. It would be of assistance to us to know approximately when colleges and departments are going to carry out the testing as we hope to put some of the tests to double use in order to increase the size of the sample of students in University Departments of Education. This will enable the purely national analysis to be more adequate for this sector.

Youre sincerely

K.M. Miller

K.M. Miller (Dr.)
Senior Research Officer.

TU5

CROSS-NATIONAL STUDY OF EDUCATION STUDENTS

NAME ____

INSTITUTION ______________________________________

Briefing meetings will be held as follows:-

	26th May	28th May	22nd May
LONDON	X		X
EDINBURGH	X	X	
BIRMINGHAM		X	X

A. Please indicate:

(1) which of the three meetings would be most convenient for you to attend

(2) which of the other two you could attend if it became necessary to even up the numbers attending each.

B. If known, please indicate the approximate dates of testing

Please return this form to Dr. K.M. Miller, N.F.E.R., 79, Wimpole Street, London, W.1, as promptly as possible.

Instructions for Drawing Samples of Students from Training Colleges and Departments of Education

As already indicated in earlier documents the sample of students to be tested in the cross national study is to be randomly drawn from among all the (defined) students in the appropriate course groups. Basically, the procedure is to select a certain proportion of students from each College course group (1) Junior or combination of courses listed as Junior, (2) Junior/Secondary, (3) Secondary, (4) Post-graduate students taking a diploma or certificate either in a college or a department.

In most colleges there will be between three and nine specific groups, while in a few there will be ten or eleven. The possibilities are shown in the following table. The cells in the table have been numbered to permit easy reference for the actual numbers of students to be drawn in each institution.

	Nursery/Infant/ Junior	Junior/Secondary	Secondary
1st year	1	4	7
2nd year	2	5	8
3rd year	3	6	9
4th year (where applic.)			10
Post-grad.			11

PROCEDURE:

1. All students falling within a cell of the above table to be listed alphabetically and then numbered from 01 onwards.

N.B. MODIFICATION: a) when students take a main or principal subject then they should first be grouped according to their main or principal subject and arranged alphabetically within these groups.

b) the subject groups (e.g. geography, mathematics etc. should be arranged alphabetically.

c) if a college takes both men and women, all men should be listed first and then all women - within each cell and subject group.

2. For each list of students in a cell of the above table for your college a random starting number and an appropriate sampling fraction number are given on the attached sheet (TU7). Starting with a random starting number go through the list using the sampling fraction number and note the names of students selected. EXAMPLE: Cell number 7 (1st year secondary students)
Random starting number - 4
Sampling fraction number - 9
Starting with the 4th name on the list go through and select every 9th student i.e. students numbered 4, 13, 22, 31 ... etc.

3. Each student selected will need to be given a research number but instructions for doing this will be given in the supervisor's handbook.

PROCEDURE FOR DRAWING SUBSTITUTES:

It is conceivable that certain students, say for illness or other reasons, be unable or unwilling to participate in the study. If this should occur it is essential that a substitute be drawn for the person not participating. Various possibilities for drawing substitutes are available, but the one which seems to offer least difficulty in the present study, is to ask that the person next on the list to any student of the original group who drops out, be invited. If the person who has to be replaced is the last name of a course group choose the student before him on the list.

TU6 (Revised)

REVISED SAMPLING PROCEDURES

1. In the case of students following Nursery, Infant or Junior courses or combination of these courses, it will not be necessary to arrange students within subject groups. An alphabetical list covering all students in the 'cell' will suffice.

2. All J/S students should be listed alphabetically (men and women separately) and the appropriate number of students selected.

3. In the case of graduates taking one year courses, the arrangement should be, ideally, in terms of main teaching subject area. However, it has been pointed out that in some institutions it will not be possible to do this and that arrangement according to degree type - Arts, Science, Social Science, etc. would be the most appropriate one.

Institution: . . . .

Cell Number in Table TU6	Number to be Tested	Starting Point	Sampling Fraction Number
1 (1st Juniors)			
2 (2nd Juniors)			
3 (3rd Juniors)			
4 (1st Jun/Sec)			
5 (2nd Jun/Sec)			
6 (3rd Jun/Sec)			
7 (1st Sec)			
8 (2nd Sec)			
9 (3rd Sec)			
10 (4th Sec)			
11 (Post-grad.1 yr.)			

N.B. In determining the starting point and sampling fraction number, the numbers given in TU3 have been used. If for any reason these figures have changed a different starting point and sampling fraction number may be needed.

APPENDIX B

Institutions Visited in Great Britain

Aberdeen College of Education (Aberdeen)
Bangor University College of North Wales (Bangor)
City of Birmingham Training College
Brentwood Training College (Brentwood)
Bretton Hall Training College (Bretton)
Bognor Regis Training College (Bognor Regis)
Cheshire County Training College (Crewe)
De La Salle Training College (Middleton, Manchester)
Digby Stuart College (London)
Dundee College of Education (Dundee)
University of Exeter
Gipsy Hill Training College (Kingston-upon-Thames)
Homerton College (Cambridge)
University of Hull
Jordanhill College of Education (Glasgow)
Kesteven Training College (Stoke Rochford, Lincs.)
City of Leicester Training College (Scraptoft, Leicester)
Leicester University (Leicester)
University of Liverpool
Moray House College of Education (Edinburgh)
Neville's Cross Training College (Durham)
University of Newcastle
North Riding Training College (Scarborough)
Northumberland College (Alnwick)
Notre Dame College of Education (Glasgow)
Nottingham Training College (Clifton, Nottingham)
Rolle College (Exeter)
St. Joseph's Training College (Belfast)
St. Katharine's College (Tottenham, London)
College of St. Mark & St. John (London)
College of St. Matthias (North Bristol)
City of Sheffield Training College
Shenstone College (Worcester)
University of Southampton (Southampton)
Southlands Training College (London)
Stranmillis College (Belfast)
Swansea Training College (Town hill, Swansea)
Trinity College (Carmarthen)
Westminster College (North Hinksey, Oxford)

APPENDIX C

Institutions Visited in the United States

University of California (Santa Barbara, California)

Eastern Michigan University (Ypsilanti, Michigan)

Findlay College (Findlay, Ohio)

State College at Fitchburg (Fitchburg, Massachusetts)

Illinois State University (Normal, Illinois)

Lamar State College of Technology (Beaumont, Texas)

Livingstone College (Salisbury, North Carolina)

Louisiana Polytech. Institute (Ruston, Louisiana)

University of Missouri (Columbia, Missouri)

State University of New York (Fredonia, New York)

Northeastern State College (Tahlequah, Oklahoma)

Rhode Island College (Providence, Rhode Island)

Sacramento State College (Sacramento, California)

Shippensburg State College (Shippensburg, Pennsylvania)

College of St. Teresa (Winona, Minnesota)

Taylor University (Upland, Indiana)

Wisconsin State College (Whitewater, Wisconsin)

APPENDIX D

Initial Sample of United States Institutions

The American University (Washington, D. C.)
University of Arizona
Berry College (Georgia)
California State College (Hayward, California)
California State College (Pennsylvania)
University of California at Santa Barbara
Central Connecticut State College
Central Washington State College
Colorado State College
Dickinson State Teachers College (North Dakota)
East Carolina College (North Carolina)
Eastern Michigan University
Edgewood College of the Sacred Heart (Wisconsin)
Findlay College (Ohio)
State College at Fitchburg (Massachusetts)
State University of New York, Freedonia
Fresno State College (California)
Georgia Southern College
Gorham State Teachers College (Maine)
Graceland College (Iowa)
Hunter College (New York)
Illinois State University
Indiana State College
Lamar State College of Technology (Texas)
Livingstone College (North Carolina)
Longwood College (Virginia)
Louisiana Polytechnic Institute
Miami University (Ohio)
Mississippi College
University of Missouri
Northeastern State College (Oklahoma)
Northern Montana College
Northwest Missouri State College
Ohio State University
Pacific Lutheran University (Washington)
State University of New York, Plattsburgh
Rhode Island College
Sacramento State College (California)
College of St. Teresa (Minnesota)
San Jose State College (California)
Shippensburg State College (Pennsylvania)
Southeast Missouri State College
Taylor University (Indiana)
Tennessee A and I State University
State Teachers College at Towson (Maryland)
Western Michigan University
University of Wichita (Kansas)
Wiley College (Texas)
Wisconsin State College, Whitewater
University of Wisconsin

APPENDIX E

Final Participating Sample of United States Institutions

Brooklyn College of the University of New York
California State College (Hayward, California)
California State College (Pennsylvania)
University of California at Santa Barbara (California)
Central Washington College of Education
East Carolina College (North Carolina)
Eastern Michigan University
Edgewood College of the Sacred Heart (Wisconsin)
Findlay College (Ohio)
State College at Fitchburg (Massachusetts)
Gorham State Teachers College (Maine)
Graceland College (Iowa)
Illinois State University
Lamar State College of Technology (Texas)
Livingstone College (North Carolina)
Longwood College (Virginia)
Louisiana Polytechnic Institute
Mississippi College
University of Missouri
Northeastern State College (Oklahoma)
*Northern Montana College
Northwest Missouri State College
Pacific Lutheran University (Washington)
Rhode Island College
Sacramento State College (California)
College of St. Teresa (Minnesota)
Shippensburg State College (Pennsylvania)
State University of New York, Freedonia
State University of New York, Plattsburgh
Taylor University (Indiana)
University of Toledo (Ohio)
State Teachers College at Towson (Maryland)
Tennessee A and I State University
Washburn University (Kansas)
Wiley College (Texas)
Wisconsin State College, Whitewater

*Data from Northern Montana College was not included in the final sample due to data being received too late for processing.

APPENDIX F

Final Participating Sample of United Kingdom Institutions

England and Wales

City of Birmingham Training College (Birmingham)
Bognor Regis Training College (Bognor Regis)
Brentwood Training College (Brentwood)
Cheshire County Training College (Crewe)
De La Salle College (Middleton, Manchester)
Digby Stuart College (London)
Edge Hill Training College (Ormskirk, Lansc.)
Froebel Educational Institute (London)
Gipsy Hill Training College (Kingston-upon-Thames)
Goldsmiths College (New Cross, London)
Homerton College (Cambridge)
Kesteven Training College (Stoke Rochford, Lincs.)
King Alfreds College (Winchester)
City of Leicester Training College (Scraptoft, Leicester)
Neville's Cross Training College (Durham)
North Riding Training College (Scarborough)
Northumberland (Alnwick)
Nottingham Training College (Clifton)
Rolle College (Exmouth)
St. Katharine's College (Tottenham, London)
College of St. Mark and St. John (London)
St. Mary's College (Cheltenham)
College of St. Matthias (Fishponds, Bristol)
Sedgeley Park Training College (Prestwick, Manchester)
Shenstone College (Worcestershire)
Swansea Training College (Town Hill, Swansea)
Trinity College (Carmarthen)
Westminster College (North Hinksey, Oxford)

University, Departments of Education

Bangor University College of North Wales (Bangor)
University of Exeter (Exeter)
University of Hull (Hull)
Leicester University (Leicester)
University of Liverpool (Liverpool)
University of Newcastle (Newcastle-upon-Tyne)
University of Southampton (Southampton, Hampshire)
The University (Sheffield)
University College (Swansea)

Scotland

Aberdeen College of Education
Dundee College of Education
Jordanhill College of Education (Glasgow)
Moray House College of Education (Edinburgh)
Notre Dame College of Education (Glasgow)

Northern Ireland

St. Joseph's Training College (Belfast)
Stranmillis College (Belfast)

APPENDIX G

Area Training Organizations and Their Respective Regional Code

A. Birmingham

B. Bristol

C. Cambridge

D. Durham

E. Exeter

F. Hull

G. Keele

H. Leeds

J. Leicester

K. Liverpool

L. London

M. Manchester

N. Newcastle

O. Nottingham

P. Oxford

Q. Reading

R. Sheffield

S. Southampton

T. Wales

APPENDIX H

Strata Means for All Measures and Years, Elementary and Secondary: Tables 27-62

APPENDIX H

TABLE 27

Mean Scores for the United Kingdom on Minnesota Teacher Attitude Inventory and Ryans Characteristics Measures; Elementary First Year

Measure	Strata		
	Scotland	Northern Ireland	England & Wales Train. Colleges
B Learning Centered	49.9	48.5	47.6
I Verbal Understanding	63.6	63.3	64.4
S Emotional Stability	52.9	53.7	54.0
X Understanding; Friendly	52.5	54.7	53.6
Y Responsible	50.5	50.9	50.9
Z Stimulating; Imaginative	54.3	55.6	55.5
R Opinion of Students	50.4	51.8	52.5
R_1 Opinion of Classroom Procedures	52.0	53.3	53.1
Q Opinion of Administrative Personnel	48.5	51.0	47.6
MTAI	6.1	29.3	26.3

TABLE 28

Mean Scores for the United Kingdom on Minnesota Teacher Attitude Inventory and Ryans Characteristics Measures; Elementary Second Year

Measure	Strata		
	Scotland	Northern Ireland	England & Wales Train. Colleges
B Learning Centered	49.5	48.0	47.2
I Verbal Understanding	64.3	63.0	65.1
S Emotional Stability	52.5	55.1	53.6
X Understanding; Friendly	52.3	55.4	54.0
Y Responsible	50.1	51.2	51.2
Z Stimulating; Imaginative	54.3	56.2	55.9
R Opinion of Students	51.7	54.0	52.5
R_1 Opinion of Classroom Procedures	52.3	53.5	53.5
Q Opinion of Administrative Personnel	48.9	53.0	47.4
MTAI	14.3	45.6	35.7

TABLE 29

Mean Scores for the United Kingdom on Minnesota Teacher Attitude Inventory and Ryans Characteristics Measures; Elementary Final Year

		Strata		
	Measure	Scotland	Northern Ireland	England & Wales Train. Colleges
B	Learning Centered	48.1	47.0	47.6
I	Verbal Understanding	64.5	62.4	64.7
S	Emotional Stability	52.8	53.5	53.2
X	Understanding; Friendly	53.1	55.0	54.0
Y	Responsible	51.0	50.5	51.8
Z	Stimulating; Imaginative	55.3	55.7	55.5
R	Opinion of Students	52.3	52.9	52.8
R_1	Opinion of Classroom Procedures	52.3	52.7	53.2
Q	Opinion of Administrative Personnel	46.7	50.1	47.4
	MTAI	30.4	48.7	33.2

TABLE 30

Mean Scores for the United Kingdom on Minnesota Teacher Attitude Inventory and Ryans Characteristics Measures; Secondary First Year

Measure	Strata: Northern Ireland	Strata: England & Wales Train. Colleges
B Learning Centered	49.7	48.1
I Verbal Understanding	64.5	64.2
S Emotional Stability	54.6	54.6
X Understanding; Friendly	54.3	53.0
Y Responsible	50.4	51.2
Z Stimulating; Imaginative	55.3	55.5
R Opinion of Students	53.5	52.3
R_1 Opinion of Classroom Procedures	53.1	52.9
Q Opinion of Administrative Personnel	50.7	47.8
MTAI	28.6	22.7

TABLE 31

Mean Scores for the United Kingdom on Minnesota Teacher Attitude Inventory and Ryans Characteristics Measures; Secondary Second Year

Measure	Strata	
	Northern Ireland	England & Wales Train. Colleges
B Learning Centered	47.3	48.8
I Verbal Understanding	65.3	63.9
S Emotional Stability	56.9	54.4
X Understanding; Friendly	56.1	51.7
Y Responsible	51.2	50.5
Z Stimulating; Imaginative	56.0	54.2
R Opinion of Students	54.3	51.2
R_1 Opinion of Classroom Procedures	53.5	52.6
Q Opinion of Administrative Personnel	51.4	46.3
MTAI	44.5	18.8

TABLE 32

Mean Scores for the United Kingdom on Minnesota Teacher Attitude Inventory and Ryans Characteristics Measures; Secondary Final Year

	Strata			
Measure	Scotland	Northern Ireland	England & Wales Train. Colleges	England & Wales Univ. Grads.
B Learning Centered	49.6	48.6	48.6	49.6
I Verbal Understanding	67.6	65.8	65.4	66.5
S Emotional Stability	53.3	55.0	54.8	54.4
X Understanding; Friendly	51.3	54.0	52.3	52.2
Y Responsible	50.6	51.1	51.3	50.5
Z Stimulating; Imaginative	54.3	56.8	54.9	54.2
R Opinion of Students	49.8	53.0	51.8	51.4
R_1 Opinion of Classroom Procedures	51.9	53.5	52.9	52.4
Q Opinion of Administrative Personnel	47.7	49.7	46.8	46.3
MTAI	8.0	38.8	23.0	21.4

TABLE 33

Mean Scores for the United Kingdom on Academic Achievement Measures and Cattell Culture-Fair Intelligence Test (IPAT); Elementary First Year

Measure	Strata Scotland	 Northern Ireland	 England & Wales Train. Colleges
English Composition	63.2	55.5	58.2
Biological Science	17.2	17.8	20.8
Physical Science	15.2	16.4	16.7
Total Natural Science	32.5	34.3	37.5
Fine Arts	20.6	18.9	23.8
Literature	23.4	24.0	25.0
Total Humanities	41.5	40.9	46.5
Mathematics	21.9	25.2	19.3
IPAT	110.1	114.5	113.3

TABLE 34

Mean Scores for the United Kingdom on Academic Achievement Measures and Cattell Culture-Fair Intelligence Test (IPAT); Elementary Second Year

Measure	Strata		
	Scotland	Northern Ireland	England & Wales Train. Colleges
English Composition	63.5	55.5	59.1
Biological Science	21.2	18.4	21.5
Physical Science	16.7	15.9	17.4
Total Natural Science	37.9	34.3	39.0
Fine Arts	23.7	20.6	24.8
Literature	24.7	24.4	26.0
Total Humanities	45.6	42.2	48.3
Mathematics	21.8	22.7	19.8
IPAT	112.3	111.9	113.7

TABLE 35

Mean Scores for the United Kingdom on Academic Achievement Measures and Cattell Culture-Fair Intelligence Test (IPAT); Elementary Final Year

Measure	Strata		
	Scotland	Northern Ireland	England & Wales Train. Colleges
English Composition	67.5	55.5	58.3
Biological Science	22.3	18.7	20.7
Physical Science	18.7	16.3	16.1
Total Natural Science	41.1	35.1	36.9
Fine Arts	24.3	22.7	25.3
Literature	26.3	25.8	25.9
Total Humanities	47.8	45.7	47.9
Mathematics	23.0	22.0	17.7
IPAT	112.4	112.6	112.1

TABLE 36

Mean Scores for the United Kingdom on Academic Achievement Measures and Cattell Culture-Fair Intelligence Test (IPAT); Secondary First Year

Measure	Strata Northern Ireland	 England & Wales Train. Colleges
English Composition	60.4	57.0
Biological Science	20.0	22.9
Physical Science	21.3	21.8
Total Natural Science	41.4	44.7
Fine Arts	19.4	23.4
Literature	24.4	24.4
Total Humanities	41.8	45.3
Mathematics	30.3	25.8
IPAT	112.6	115.0

TABLE 37

Mean Scores for the United Kingdom on Academic Achievement Measures and Cattell Culture-Fair Intelligence Test (IPAT); Secondary Second Year

Measure	Strata Northern Ireland	 England & Wales Train. Colleges
English Composition	60.2	58.1
Biological Science	24.2	24.4
Physical Science	22.4	21.6
Total Natural Science	46.6	46.0
Fine Arts	22.5	24.0
Literature	26.5	24.5
Total Humanities	45.9	45.7
Mathematics	28.7	26.6
IPAT	115.1	115.3

TABLE 38

Mean Scores for the United Kingdom on Academic Achievement Measures and Cattell Culture-Fair Intelligence Test (IPAT); Secondary Final Year

	Strata			
Measure	Scotland	Northern Ireland	England & Wales Train. Colleges	England & Wales Univ. Grads.
English Composition	73.0	63.7	59.8	67.1
Biological Science	26.3	24.3	25.1	24.1
Physical Science	25.4	22.5	21.6	24.7
Total Natural Science	51.7	46.8	46.8	48.9
Fine Arts	28.1	25.3	25.1	27.5
Literature	32.7	28.4	25.5	29.3
Total Humanities	57.3	50.4	47.6	53.0
Mathematics	29.7	28.7	25.1	27.4
IPAT	114.5	109.9	115.4	116.3

TABLE 39

Mean Scores for the United Kingdom on Professional Knowledge Measures; Elementary First Year

Measure	Strata Scotland	 Northern Ireland	 England & Wales Train. Colleges
Child Development	16.5	19.0	18.7
Guidance and Measurement	13.1	12.4	14.2
Instructional Methods	15.8	15.9	17.3
Elementary Education	53.1	55.2	57.0

TABLE 40

Mean Scores for the United Kingdom on Professional Knowledge Measures; Elementary Second Year

Measure	Strata Scotland	 Northern Ireland	 England & Wales Train. Colleges
Child Development	18.9	21.8	19.8
Guidance and Measurement	15.0	17.6	15.8
Instructional Methods	17.3	19.3	18.2
Elementary Education	56.5	61.1	59.9

TABLE 41

Mean Scores for the United Kingdom on Professional Knowledge Measures; Elementary Final Year

Measure	Strata Scotland	 Northern Ireland	 England & Wales Train. Colleges
Child Development	20.3	20.1	19.9
Guidance and Measurement	18.4	18.5	16.0
Instructional Methods	19.7	19.4	18.7
Elementary Education	59.8	64.6	59.9

TABLE 42

Mean Scores for the United Kingdom on Professional Knowledge Measures; Secondary First Year

Measure	Strata Northern Ireland	 England & Wales Train. Colleges
Child Development	22.7	18.2
Guidance and Measurement	18.5	14.3
Instructional Methods	20.4	17.4

TABLE 43

Mean Scores for the United Kingdom on Professional Knowledge Measures; Secondary Second Year

Measure	Strata Northern Ireland	 England & Wales Train. Colleges
Child Development	22.0	18.9
Guidance and Measurement	18.4	16.1
Instructional Methods	20.6	17.4

TABLE 44

Mean Scores for the United Kingdom on Professional Knowledge Measures; Secondary Final Year

Measure	Strata Scotland	 Northern Ireland	 England & Wales Train. Colleges	 England & Wales Univ. Grads.
Child Development	21.2	19.7	19.6	19.8
Guidance and Measurement	20.2	17.6	17.0	17.8
Instructional Methods	20.7	18.4	19.0	20.1

TABLE 45

Mean Scores for the United States on Minnesota Teacher Attitude Inventory and Ryans Characteristics Measures; Elementary First Year

Measure	NCATE Private	NCATE Public	Non-NCATE Private	Non-NCATE Public
	Strata			
B Learning Centered	51.4	50.2	51.2	49.6
I Verbal Understanding	63.6	63.3	60.2	62.7
S Emotional Stability	55.1	53.9	54.5	51.8
X Understanding; Friendly	54.3	54.5	53.3	53.5
Y Responsible	50.6	51.5	49.5	49.9
Z Stimulating; Imaginative	54.8	55.4	53.8	54.5
R Opinion of Students	53.0	53.9	51.5	51.5
R_1 Opinion of Classroom Procedures	52.7	53.2	52.0	52.7
Q Opinion of Administrative Personnel	50.8	49.4	48.3	47.7
MTAI	16.7	37.7	23.3	31.8

TABLE 46

Mean Scores for the United States on Minnesota Teacher Attitude Inventory and Ryans Characteristics Measures; Elementary Second Year

Measure	Strata NCATE Private	 NCATE Public	 Non-NCATE Private	 Non-NCATE Public
B Learning Centered	49.8	50.3	50.5	51.6
I Verbal Understanding	64.3	63.0	60.2	63.1
S Emotional Stability	54.5	54.1	54.5	53.4
X Understanding; Friendly	56.4	54.3	54.0	53.6
Y Responsible	51.1	51.3	49.9	51.9
Z Stimulating; Imaginative	55.8	55.1	55.1	54.8
R Opinion of Students	54.6	54.1	53.1	52.8
R_1 Opinion of Classroom Procedures	53.5	53.2	53.2	52.6
Q Opinion of Administrative Personnel	51.1	49.5	49.8	49.5
MTAI	35.5	36.3	27.3	32.4

TABLE 47

Mean Scores for the United States on Minnesota Teacher Attitude Inventory and Ryans Characteristics Measures; Elementary Final Year

Measure	Strata			
	NCATE Private	NCATE Public	Non-NCATE Private	Non-NCATE Public
B Learning Centered	50.8	50.2	52.0	50.7
I Verbal Understanding	63.1	63.6	58.0	65.9
S Emotional Stability	54.4	54.7	53.4	54.6
X Understanding; Friendly	55.4	54.7	52.3	55.6
Y Responsible	51.0	51.4	50.2	52.5
Z Stimulating; Imaginative	55.7	55.9	53.9	56.0
R Opinion of Students	53.2	53.8	51.7	54.4
R_1 Opinion of Classroom Procedures	53.3	53.3	52.3	53.3
Q Opinion of Administrative Personnel	51.0	50.0	47.8	50.4
MTAI	36.1	40.1	11.5	34.8

TABLE 48

Mean Scores for the United States on Minnesota Teacher Attitude Inventory and Ryans Characteristics Measures; Secondary First Year

Measure	Strata			
	NCATE Private	NCATE Public	Non-NCATE Private	Non-NCATE Public
B Learning Centered	50.9	51.2	52.0	52.0
I Verbal Understanding	63.8	64.4	59.6	61.4
S Emotional Stability	54.5	55.1	55.0	52.2
X Understanding; Friendly	53.7	52.6	50.2	52.1
Y Responsible	52.2	50.9	50.1	50.0
Z Stimulating; Imaginative	54.7	54.6	53.6	54.1
R Opinion of Students	50.7	52.0	48.2	50.1
R_1 Opinion of Classroom Procedures	52.0	52.4	52.4	52.3
Q Opinion of Administrative Personnel	48.2	49.1	46.4	48.8
MTAI	12.7	26.6	0.3	26.6

TABLE 49

Mean Scores for the United States on Minnesota Teacher Attitude Inventory and Ryans Characteristics Measures; Secondary Second Year

Measure	Strata			
	NCATE Private	NCATE Public	Non-NCATE Private	Non-NCATE Public
B Learning Centered	50.6	51.0	51.9	50.6
I Verbal Understanding	66.3	64.8	59.5	65.8
S Emotional Stability	54.8	54.6	53.7	55.3
X Understanding; Friendly	55.0	53.1	50.8	52.5
Y Responsible	53.1	50.9	50.0	50.5
Z Stimulating; Imaginative	56.5	55.1	53.7	55.8
R Opinion of Students	53.2	51.4	49.2	51.6
R_1 Opinion of Classroom	53.0	52.8	52.2	52.8
Q Opinion of Administrative Personnel	49.3	48.3	47.2	49.1
MTAI	26.9	29.3	11.2	23.5

TABLE 50

Mean Scores for the United States on Minnesota Teacher Attitude Inventory and Ryans Characteristics Measures; Secondary Final Year

Measure	Strata			
	NCATE Private	NCATE Public	Non-NCATE Private	Non-NCATE Public
B Learning Centered	50.7	50.7	53.0	51.2
I Verbal Understanding	65.7	64.5	58.7	65.1
S Emotional Stability	55.9	54.9	55.1	55.5
X Understanding; Friendly	54.5	52.5	50.2	53.3
Y Responsible	51.8	50.9	50.4	51.6
Z Stimulating; Imaginative	55.8	55.1	53.9	55.4
R Opinion of Students	52.6	50.9	50.1	50.6
R_1 Opinion of Classroom Procedures	53.0	52.5	52.0	52.2
Q Opinion of Administrative Personnel	49.9	48.5	47.1	49.9
MTAI	18.3	25.6	9.2	23.7

TABLE 51

Mean Scores for the United States on Academic Achievement Measures and Cattell Culture-Fair Intelligence Test (IPAT); Elementary First Year

	Strata			
Measure	NCATE Private	NCATE Public	Non-NCATE Private	Non-NCATE Public
English Composition	55.6	56.8	48.4	55.1
Biological Science	23.8	24.5	19.0	23.8
Physical Science	17.1	20.0	16.6	21.0
Total Natural Science	41.0	44.6	35.7	44.8
Fine Arts	20.3	21.7	19.5	21.1
Literature	19.4	21.2	18.6	21.1
Total Humanities	37.6	41.8	36.8	39.5
Mathematics	17.6	19.9	15.8	21.0
IPAT	115.3	112.2	104.5	111.4

TABLE 52

Mean Scores for the United States on Academic Achievement Measures and Cattell Culture-Fair Intelligence Test (IPAT); Elementary Second Year

	Strata			
Measure	NCATE Private	NCATE Public	Non-NCATE Private	Non-NCATE Public
English Composition	56.4	53.7	41.9	58.2
Biological Science	25.1	24.0	17.4	24.0
Physical Science	20.1	19.6	15.1	19.0
Total Natural Science	45.3	43.7	32.6	43.0
Fine Arts	20.9	21.9	18.0	21.7
Literature	21.9	20.8	16.2	20.7
Total Humanities	40.4	43.1	32.4	40.2
Mathematics	17.3	18.3	11.9	18.4
IPAT	114.0	109.6	98.7	115.8

TABLE 53

Mean Scores for the United States on Academic Achievement Measures and Cattell Culture-Fair Intelligence Test (IPAT); Elementary Final Year

Measure	Strata NCATE Private	 NCATE Public	 Non-NCATE Private	 Non-NCATE Public
English Composition	57.0	55.0	40.5	55.6
Biological Science	22.9	23.6	16.1	24.1
Physical Science	18.0	19.5	13.1	19.2
Total Natural Science	40.9	43.1	29.3	43.3
Fine Arts	22.2	22.2	15.6	23.5
Literature	22.5	21.8	14.5	22.7
Total Humanities	42.3	42.0	28.5	43.6
Mathematics	16.9	17.9	13.1	17.0
IPAT	110.0	110.4	96.4	109.1

TABLE 54

Mean Scores for the United States on Academic Achievement Measures and Cattell Culture-Fair Intelligence Test (IPAT); Secondary First Year

Measure	Strata NCATE Private	 NCATE Public	 Non-NCATE Private	 Non-NCATE Public
English Composition	62.5	56.9	45.0	51.3
Biological Science	24.8	27.4	18.8	26.3
Physical Science	21.3	23.7	16.0	24.4
Total Natural Science	46.2	51.1	34.8	50.8
Fine Arts	23.5	21.2	15.5	21.1
Literature	25.2	23.0	17.0	17.4
Total Humanities	45.5	41.9	30.8	36.0
Mathematics	23.0	24.2	18.9	20.6
IPAT	115.5	114.9	105.3	112.9

TABLE 55

Mean Scores for the United States on Academic Achievement Measures and Cattell Culture-Fair Intelligence Test (IPAT); Secondary Second Year

	Strata			
Measure	NCATE Private	NCATE Public	Non-NCATE Private	Non-NCATE Public
English Composition	64.6	58.5	44.8	61.1
Biological Science	24.8	27.6	20.0	28.5
Physical Science	20.7	23.8	17.2	24.2
Total Natural Science	45.5	51.5	37.3	52.7
Fine Arts	24.2	21.7	17.4	23.9
Literature	28.6	24.1	17.7	25.5
Total Humanities	49.7	43.8	33.1	46.3
Mathematics	21.3	24.9	16.1	26.0
IPAT	115.4	115.4	97.5	116.6

TABLE 56

Mean Scores for the United States on Academic Achievement Measures and Cattell Culture-Fair Intelligence Test (IPAT); Secondary Final Year

Measure	Strata			
	NCATE Private	NCATE Public	Non-NCATE Private	Non-NCATE Public
English Composition	62.4	56.5	45.4	60.0
Biological Science	26.7	27.1	19.4	24.1
Physical Science	21.1	22.6	17.3	21.2
Total Natural Science	47.9	49.3	36.7	45.4
Fine Arts	25.0	23.2	16.6	24.0
Literature	28.2	24.5	16.8	25.3
Total Humanities	50.2	45.4	32.5	46.4
Mathematics	21.0	23.3	15.3	23.9
IPAT	116.8	112.6	100.0	115.6

TABLE 57

Mean Scores for the United States on Professional Knowledge Measures; Elementary First Year

Measure	Strata NCATE Private	NCATE Public	Non-NCATE Private	Non-NCATE Public
Child Development	20.0	20.5	18.9	18.8
Guidance and Measurement	17.5	17.8	16.4	17.5
Instructional Methods	17.8	18.8	16.7	18.0
Elementary Education	53.2	56.6	51.9	54.5

TABLE 58

Mean Scores for the United States on Professional Knowledge Measures; Elementary Second Year

Measure	Strata NCATE Private	NCATE Public	Non-NCATE Private	Non-NCATE Public
Child Development	22.8	20.7	18.8	22.1
Guidance and Measurement	20.3	18.8	16.1	19.5
Instructional Methods	21.1	20.0	16.9	20.8
Elementary Education	64.5	59.9	51.1	63.4

TABLE 59

Mean Scores for the United States on Professional Knowledge Measures; Elementary Final Year

	Strata			
Measure	NCATE Private	NCATE Public	Non-NCATE Private	Non-NCATE Public
Child Development	22.8	22.8	17.7	23.4
Guidance and Measurement	20.6	20.5	15.9	22.6
Instructional Methods	21.0	21.2	16.1	22.4
Elementary Education	63.5	64.7	47.6	67.0

TABLE 60

Mean Scores for the United States on Professional Knowledge Measures; Secondary First Year

	Strata			
Measure	NCATE Private	NCATE Public	Non-NCATE Private	Non-NCATE Public
Child Development	19.1	19.4	14.8	18.3
Guidance and Measurement	18.2	18.0	13.9	16.4
Instructional Methods	17.9	17.5	14.4	18.4

TABLE 61

Mean Scores for the United States on Professional Knowledge Measures; Secondary Second Year

Measure	Strata			
	NCATE Private	NCATE Public	Non-NCATE Private	Non-NCATE Public
Child Development	21.7	21.0	16.6	21.0
Guidance and Measurement	20.9	20.2	14.8	19.8
Instructional Methods	21.0	19.7	15.7	20.1

TABLE 62

Mean Scores for the United States on Professional Knowledge Measures; Secondary Final Year

Measure	Strata			
	NCATE Private	NCATE Public	Non-NCATE Private	Non-NCATE Public
Child Development	22.2	21.7	17.3	20.5
Guidance and Measurement	22.7	20.7	16.2	21.6
Instructional Methods	21.6	20.8	17.3	20.6

APPENDIX I

Institution Observational Record

Characteristics of Teacher Education Students in the British Isles and the United States

INSTITUTION OBSERVATIONAL RECORD

College______________________________ Location_________________________

Date__________________ Time_____________

A. SCOPE AND LIMITATIONS OF TEACHER EDUCATION OFFERINGS AND SERVICES:

1. Types of programs offered and types of teachers prepared, generally?

2. Explanation of why institutional program is extensive or limited?

3. Any ongoing research or experimentation to improve teacher education?

4. Any unusual aspect of the program making a unique or special contribution to teacher education?

5. Critical problems being faced by institution?

6. What concept of a quality education for pre-service teachers does there appear to be at this institution?

B. OBJECTIVES:

1. The objectives of the institution (try to obtain a statement)?

2. Who formulated the objectives (faculty, administration, ministry, etc.)?

3. Major assumptions and beliefs which underlie the objectives?

4. Do objectives differ markedly for various aspects of the institution's programs?

C. ORGANIZATION AND ADMINISTRATION:

1. Number and types of administrative officers and their relationships to each other?

2. Administrative units of the institution (departments, divisions, schools, colleges) and functions assigned to each?

3. Policy forming bodies (committees, councils, etc.); functions and relationships?

4. Officials and channels through whom policies for teacher education are formulated and administered?

D. STUDENT PERSONNEL PROGRAMS AND SERVICES:

1. Recruitment of students for teacher education.
   a. General student types (socio-economic classes, general age levels, sex representations, and any similar relevant data)?
   b. General areas (local or national) from which students are drawn?
   c. Qualifications desired in students?
   d. Recruitment programs of institution?

2. Admission standards and qualifications.
   a. Measures of academic scholarship used (grades and cut-off points)?
   b. Measures of ability used (testing programs, cut-off points)?
   c. Other qualifications required?

3. Degree of screening after initial admission?

4. Point of admission to teacher education program and requirements at this point which differ from initial admission requirements?

5. Provisions made for guidance-counseling on academic, personal, and other problems?

6. Types of records kept, systems used?

7. Any teacher placement services?

8. Certification or licensing provisions?

9. The "status" students (scholars, athletes, etc.) appear to be what group in the institution?

E. FACULTY:

1. Qualifications required of faculty in professional education (school teaching experience necessary or desired)?

2. Qualifications required of faculty outside of professional education, any differences?

3. Proportion of faculty holding Doctors, Masters, Bachelors degrees as final degree earned?

4. Faculty ranks and salary scale for ranks?

5. Teaching load (clock hours per week)?

6. Teaching assignments -- is some degree of specialization permitted?

7. Teaching methods used -- traditional or more modern (extent of use of instructional media should be included in report)?

8. Full-time vs. part-time teaching faculty?

9. Evidence of faculty improvements during the past five years.
   a. Qualifications of replacements?
   b. Any faculty increase for any reason?
   c. Faculty completion of next higher degree (especially doctorate)?
   d. Leaves and sabbaticals for study?

F. CURRICULA FOR TEACHER EDUCATION:

1. What are the apparent objectives for primary teacher education? For secondary teacher education? (Those which differ from institutional objectives.)

2. How have the curricula been established? Developed?

3. Enrollments for past year for primary (elementary) and secondary curricula (try to obtain reports if available)? How many graduated in various curricula each year? What are the enrollment trends?

4. Information relative to common elements in primary and secondary curricula.
   a. Pattern of general education required?
   b. Pattern of professional education required?
   c. Maximum and minimum of subject matter field(s) required? For secondary programs obtain the amount and character of work necessary for majors in:
      English and literature
      Speech
      Mathematics
      Science (biology, chemistry, physics)
      Social Science (history, geography, political science, etc.)
      Foreign language (specify which)

5. Any extension or correspondence work?

6. Are courses in any program common to another curriculum?

7. What is the prestigious curriculum (vis. primary, secondary, and what field of study)?

8. Are the curricula available undergraduate or graduate in nature?

9. Program and course changes recently? New programs contemplated? Any added or discarded?

10. How are the teacher education curricula evaluated?

(Obtain a catalogue from each institution visited.)

G. PROFESSIONAL LABORATORY EXPERIENCES:

1. Professional laboratory experiences provided other than student teaching (observation, participation, post student teaching, etc.)? Where? When? Degree or Amount? Integrated or separate from course work?

2. Student Teaching?
   a. Assignment of students?
   b. Integrated with work in professional education? Separate experience?
   c. All-day, part-day, hourly arrangements? Credit arrangements? Amount required?
   d. Schools used for student teaching?
   e. How supervised? Role of college supervisor and supervising teacher?
   f. Typical student teaching activities?
   g. Evaluation procedures?

3. Does the institution have a laboratory school? How is it used in the teacher education program?

H. INSTITUTIONAL SETTING, FACILITIES, AND INSTRUCTIONAL MATERIALS:

1. Overall impressions gained relative to the socio-cultural community within which the institution exists (e.g. urban, industrial, rural agrarian, etc.)?

2. Overall impressions gained relative to the nature and setting of the institution itself?

3. General building facilities? Reactions generally to:
   a. Faculty offices, classrooms?
   b. Rooms for special facilities, if any?
   c. Research facilities?
   d. Library and A-V facilities?

4. General reactions to instructional materials available?
   a. adequacy of library acquisitions (books and other collections)?
   b. Special equipment?
   c. A-V materials?
   d. Instructional materials, laboratory materials and facilities?